SUBMISSION TO

THE ROYAL COMMISSION ON ELECTRIC POWER PLANNING

PUBLIC INFORMATION HEARINGS

May 1976

Ontario
Ministry of the Environment

The Honourable
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Minister

Everett Biggs,
Deputy Minister

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The Ministry of the Environment
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PART A: INTRODUCTION

CHAPTER I. PRELIMINARY

1. PREFACE

As part of the proceedings of the Royal Commission on Electric Power Planning, Public Information Hearings are to be held. At these public hearings, Ontario Hydro and Ministries of the Provincial Government will present information on their programs and activities, and be subjected to questioning. It is understood that the Public Information Hearings will be limited to the giving and elucidation of information on the practical daily work of the agency or Ministry concerned.

Questions as to why specific programs are carried out in a particular fashion, whether they are adequate for the purpose, or whether alternative methods of achieving the stated purpose would be preferable, will be left to a future series of Hearings by the Royal Commission.

This is the second Submission presented to the Royal Commission by the Ministry of the Environment. The first, which was the Ministry's Preliminary Submission dated January 1976, suggested some approaches for the Commission to take in addressing its task, and set out from the point of view of the

Ministry of the Environment, some of the subjects and concerns with which the Commission should deal.

The Ministry's third, and Main, Submission will be presented for the Commission's Main Hearings, and will develop in greater detail a selection of the subjects discussed in the Ministry's Preliminary Submission.

2. THE ROLE OF THE MINISTRY

The Ministry of the Environment's role in recent years has been defined as "guarantor of environmental quality", and as such, the Ministry has a particular interest in the long-range planning of Ontario Hydro. By their very nature, any proposals resulting in the establishment of new electric generation or distribution facilities, inherently carry within them a broad range of effects on the natural and social environment. In accordance with an overall environmental management approach, the Ministry's familiar role of "environmental policeman" (enforcing standards and objectives in order to protect the environment), and of builder of sewer and water systems, has been set within a broader environmental planning context. The stress has been increasingly on the prevention of environmental damage, rather than on the after-the-fact abatement approach. The significance of this Ministerial role has been recognized and enhanced by the passing of The Environmental Assessment

Act, 1975, although preventive planning was already being practised through the Ministry's application of the previously existing legislation: The Ontario Water Resources Act, The Environmental Protection Act, 1971, and The Pesticides Act, 1973.

3. THE STRUCTURE AND OPERATION OF THE MINISTRY

A general description of the main structure and programs of the Ministry is contained in Appendix 1 "Environment Ontario in the Community", which describes in more detail the relationships of the Divisions and Branches, and their main concerns. Certain amendments to the contents of this book, due to modification of the Ministry structure since the book's publication, are attached to the first page.

The description of the Ministry's work will be presented in this Submission in such a fashion as to relate, as far as possible, to the workings and requirements of Ontario Hydro, and will take into account Hydro's process of designing, constructing, commissioning, and operating electrical facilities. It will, it is hoped, help to clarify the relationship between Ontario Hydro and the Ministry of the Environment as they perform their respective tasks.

The main formal contacts between the Ministry of the Environment and "proponents" or "clients" such as Ontario Hydro, deal with the approval of proposed projects, of the facility during construction, and of its equipment, and with the abatement of pollution once the facility is operating.

The first aim of the proponent in its dealings with the Ministry is therefore to obtain approval for the construction and operation of its facilities: the main channel in the Ministry of the Environment, through which formal approvals flow, is the Environmental Approvals Branch, while certain so-called quasi-approvals are dealt with by the Regional Offices.

The approvals activities of the Ministry and in particular those of the Environmental Approvals Branch, require technical support, which is supplied by other Branches such as the Air Resources, Water Resources, and Pollution Control Branches, as well as by many of the activities of the Regional Offices. Practical expertise, criteria and guidelines for air and water quality, results of research and so on, are thus provided in support of the Ministry's approvals activity.

Monitoring of equipment and abatement of pollution are generally carried out by the Regional Offices.

It should be pointed out that the other functions of the Ministry of the Environment, such as the capital works program for sewage and water systems, have not been touched on here, since they do not have direct bearing on the Ministry's dealings with Ontario Hydro.

In the position of supporting all the above activities, are those portions of the Ministry which ensure the smooth functioning of the organization, and are located in the Finance and Administration Division.

4. THE MATRIX

The foregoing information may be systemized by means of a Matrix as shown in Figure 1, (Page 10). This Matrix relates the programs and functions of the Ministry to the environment which it is the Ministry's role to protect. It will be noted that the environment includes both the natural environment and that of man within it, in accordance with the Ministry's broader mandate referred to above.

a) Contents of the Matrix

The Matrix depicts the role of the Ministry and stresses the inter-relations among the various parts of the organization.

The main Programs of the Ministry are shown in Row A; while Row B, shows the main technical functions of the Ministry of the Environment, grouped by program. These technical functions are: Prevention of Environmental Damage (Column 2); Monitoring, Surveillance, Abatement, and Feedback (Column 4); and the technical Support for both these sets of actions (Column 3). The administrative support function (Column 6, "Organizational Support") referred to earlier, is carried out in the Finance and Administration Division of the Ministry. The particular legislation involved, and the relevant Branches of the Ministry, are shown in Rows C and D respectively. Environmental Elements are described in Rows E to H.

b) Relationship Between the Programs and Structure Of the Ministry

Preventive actions are chiefly associated with the Environmental Assessment and Planning Program of the Ministry, which is centred in the Division of the same name, and specifically in the Environmental Approvals Branch. The Branch receives support, input and information both from within the same Division, and from the Regional Offices. The Monitoring and Abatement etc. functions of the Environmental Control Program, are centred in the Regional Operations Division of the Ministry. As can be seen, the regulation of pesticides application, which is significant for Ontario Hydro right-of-way maintenance, appears under both programs.

Insofar as Ontario Hydro's operations are concerned, the Resource Recovery Program, an activity carried out within the Environmental Assessment and Planning Division, deals with the use of municipal solid waste as a fuel for generating stations. The proposal involving Metro Toronto has been named "Watts from Waste".

c) How the Matrix Works

A short example may serve to explain how this Matrix works. For instance, let us take a case where Ontario Hydro wishes to build a new generating station. Column 2, headed "Prevention of Environmental Damage", shows that approvals etc. are required in connection with The Environmental Assessment Act, The Environmental Protection Act, The Ontario Water Resources Act, and The Pesticides Act.(The Pesticides Act is not applicable to the example being examined). The Branch of the Ministry responsible for these approvals is the Environmental Approvals Branch. Approvals under The Environmental Assessment Act, which are required first, are dealt with by the Environmental Assessment Section, while the Industrial Approvals Section is responsible for approvals etc. under The Environmental Protection Act and The Ontario Water Resources Act. As the Matrix shows, these approvals deal with with protection of all environmental elements.

Column B, headed "Support (Technical)", shows how these approvals functions depend on the support and input from other portions of the Ministry. The Air Resources, the Water Resources, the Pollution Control Branches, the Regional Offices and the Laboratory Services Branch all make input, including Guidelines and Criteria, Regulations, standards, etc. The relevant legislation is The Environmental Protection Act, and The Ontario Water Resources Act.

Column C, headed "Monitoring, Surveillance, Abatement, Feedback", also operates under The Environmental Protection Act and The Ontario Water Resources Act as far as the generating station under review is concerned. As can be seen, the Regional Offices are chiefly concerned at this stage, (except for noise and vibration). Through their Industrial Abatement and Technical Support Sections, the Regional Offices carry out monitoring and surveillance, industrial abatement (if necessary by Control or Stop Orders or prosecutions), and arrange for feedback both to Head and Regional Offices. Technical support for these operations comes from the Head Office Branches (Air Resources, Water Resources, Pollution Control), from within the Regional Offices, and from the Laboratories, as indicated in Column 3.

Column 5, the Energy and Resources Conservation function of the Ministry is not relevant to the example under review here.

Column 6 illustrates that the function of "Organizational Support" throughout the Ministry is performed by the Branches of the Finance and Administration Division.

FIG. 1

MATRIX: RELATIONSHIP OF MINISTRY OF ENVIRONMENT PROGRAMS AND THE PROTECTION OF THE ENVIRONMENT

SHOWN COMPLETED FOR ONTARIO HYDRO PROJECTS.

MINISTRY OF ENVIRONMENT PROGRAMS Row 'A'		ENVIRONMENTAL ASSESSMENT AND PLANNING	ENVIRONMENTAL CONTROL		RESOURCE RECOVERY	FINANCE & ADMIN.
Col."1"		Col."2"	Col."3"	Col."4"	Col."5"	Col."6"
M.O.E. FUNCTIONS → Row 'B'		PREVENTION OF ENVIRONMENTAL DAMAGE Approvals, Permits, Licences	SUPPORT (TECHNICAL) Guidelines, Criteria, Regulations, Standards, Research, advice	MONITORING, SURVEILLANCE, ABATEMENT, FEEDBACK Control orders, stop orders Prosecutions, Lab. Work	ENERGY & RESOURCE CONSERVATION	ORGANIZATIONAL SUPPORT
LEGISLATION → Row 'C'		Environmental Assessment Act Environmental Protection Act Ontario Water Resources Act Pesticides Act	Environmental Protection Act Ontario Water Resources Act Pesticides Act	Environmental Protection Act Ontario Water Resources Act Pesticides Act	Environmental Protection Act	—
BRANCH Section → Row 'D'		HEAD OFFICE: ENVIRONMENTAL APPROVALS BRANCH -Environmental Assessment Section -Industrial Approvals Section POLLUTION CONTROL BRANCH - Pesticides Control Section	HEAD OFFICE: AIR RES. BRANCH WATER RES. BRANCH POLLUTION CONT. BR. Pesticides Sec. Noise P. Cont. Sec. Ind. Sec. REGIONAL OFFS: Tech. Support Sec. LAB SERVS. BR.	REGIONAL OFFICES: Tech. Support Sectns. Ind. Abatement Sectns.	RESOURCE RECOVERY BRANCH	ADMIN. S. BR. FIN. SERV. BR. P.P. & E. BR. LEGAL S. BR. PERSONNEL BR.
ENVIRONMENTAL ELEMENTS	NATURAL ENVIRONMENT — AIR Row 'E'	ENVIRONMENTAL APPROVALS BRANCH -Environmental Assessment Section - Industrial Approvals Section	AIR RES. BR. POLLUTION CON. BR. -Ind. Section -Contingency P.S. REGN'L OFFICES -Tech. Supp. Sec. LAB SERVS. BR.	REGIONAL OFFICES -Tech. Support Sectns. -Ind. Abatement Sectns.	—	BRANCHES as above
	NATURAL ENVIRONMENT — WATER Row 'F'	ENVIRONMENTAL APPROVALS BRANCH -Environmental Assessment Section -Industrial Approvals Section	WATER RES. BR. POLLUTION C. BR. -Pesticides Sec. -Contingency P.S. (AIR RES. BR.) REGIONAL OFFS -Tech. Supp. Sec. LAB. SERVS. BR.	REGIONAL OFFICES -Tech. Support Sectns. -Ind. Abatement Sectns.	—	
	NATURAL ENVIRONMENT — LAND Row 'G'	ENVIRONMENTAL APPROVALS BRANCH -Environmental Assessment Section -Industrial Approvals Section POLLUTION CONTROL BRANCH -Pesticides Control Section	POLLUTION C. BR. -Pesticides Sec. -Contingency P.S. (WATER RES. BR.) REGIONAL OFFS -Tech. Supp. Sec. LAB SERVS. BR. POLLUTION CON. BR. -Pesticides Con. Br.	REGIONAL OFFICES -Tech. Support Sectns. -Ind. Abatement Sectns. (POLLUTION CONT. BRANCH) (-Pesticides Sectn)	—	
	"MAN" — SOCIAL & COMMUNITY Row 'H'	ENVIRONMENTAL APPROVALS BRANCH -Environmental Assessment Section -Industrial Approvals Section	POLLUTION CON. BR. -Noise Poll. C. Sec.	POLLUTION CONT. BR. -Noise Pollution Cont. Sectn.	RESOURCE RECOVERY BR. -Program Devl. Section	

CHAPTER II. ENVIRONMENTAL LEGISLATION

1. INTRODUCTION

The Ministry is directly concerned with the protection of the environment through its administration of The Enviromental Assessment Act, 1975; The Environmental Protection Act, 1971; The Ontario Water Resources Act, 1970; and The Pesticides Act, 1973.

Under the provisions of The Ontario Water Resources Act, The Environmental Protection Act, and The Pesticides Act, the Ministry has developed and applied water quality Criteria and Guidelines, air quality Regulations and Guidelines, Guidelines with respect to noise control, a program of pre-development review, and Pesticides Regulations. The Environmental Assessment Act is an extension and elaboration of the pre-development (i.e. preventive) approach already taken in the administration of the other three Acts mentioned above.

In dealing with the Ministry of the Environment for the approval of proposed large capital projects, Ontario Hydro must first satisfy the requirements of The Environmental Assessment Act, before those of The Environmental Protection Act, The Ontario Water Resources Act and The Pesticides Act. The Environmental Assessment Act will therefore be the first to be dealt with in this Chapter, after which the other Acts will be discussed.

2. THE ENVIRONMENTAL ASSESSMENT ACT, 1975

a) General

At time of writing (April 1976), the Act has been proclaimed insofar as the establishment of the Environmental Assessment Board is concerned. However, since further proclamation is expected to occur in the near future, further discussions in this Submission regarding the Act, will present the situation as it will be once the Act is fully in operation.

The Environmental Assessment Act is particularly significant in regard to the long-range planning of Ontario Hydro's system. Ontario Hydro is one of the bodies affected by the Act, and those activities of Hydro to which the Act applies have been agreed upon in discussions between Hydro and the Ministry of the Environment.

These activities include the planning, design, construction, operation and retirement of virtually all new generating, transmission and transformer facilities.

The agreement between Hydro and the Ministry of the Environment has been drafted in a way which will permit activities to be brought under the Act over a period of time. Certain Hydro activities, although exempted from the Act because of their advanced stage of development, will still be

subject to the informal environmental review mechanism between Ontario Hydro and the Ministry of the Environment, which was adopted administratively several years ago.

Two basic kinds of environmental assessments are contemplated: individual environmental assessments and program environmental assessments. Activities with potentially the more significant types of environmental effects, will require individual environmental assessments. These include all major new facilities. Program environmental assessments generally apply to projects of lesser significance.

b) Section 5(3)

Section 5(3) of The Environmental Assessment Act sets out the contents of an environmental assessment document (see Appendix 5). The essence of environmental assessment is the consideration of alternatives, and of their consequences. Section 5(3) requires descriptions of the environment affected either directly or indirectly, the effects that will be caused to that environment by the proposed alternatives and mitigating actions, together with an evaluation of the various alternative actions. It should be noted that the Act defines "environment" more broadly than in the other statutes administered by the Ministry of the Environment, and includes man and the social, economic and cultural conditions that influence the life of man or the community (Section 1(c)).

c) The Process Under the Act

The Act sets out two major decision points:

(1) Acceptance or amendment and acceptance of the environmental assessment;

(2) Approval (or not) of an undertaking.

"Acceptance" of the environmental assessment is dependent on whether it is considered that the information contained in the document submitted is an adequate base on which to make a decision on project approval, (whether yes or no). Once the environmental assessment has been accepted, the way is then clear to the eventual major decision as to whether to approve the undertaking (with or without conditions), or to reject it.

In this process, decisions are made either by the Minister of the Environment, or by the Environmental Assessment Board. These major decisions may take one of three routes:

(i) The Minister decides on acceptance, or amendment and acceptance of the Environmental Assessment, and with Cabinet approval, also decides on approval of the undertaking;

(ii) The Board makes both decisions;

(iii) The Minister makes the first decision, and the Board makes the second one.

When an Environmental Assessment is filed with the Minister, he causes a review of it to be prepared. The Assessment and review are circulated to various affected persons, including municipalities and public, for comment (Section 7). After considering the comments, the Minister then accepts (or amends and accepts) the Environmental Assessment, and advises interested persons accordingly (Sections 9 and 10(2)). Before accepting the Environmental Assessment, the Minister could require the proponent to do more research or provide more information.

After considering any further submissions, the Minister of the Environment, with the approval of Cabinet, either gives approval to proceed with the undertaking, gives approval subject to terms and conditions, or refuses to give approval to proceed (Section 14). The Minister may at any stage refer the matter to the Environmental Assessment Board for decision, either as to the acceptability of the Environmental Assessment or approval of the undertaking or both. A member of the public or the proponent may also require, at specified stages in the process, a Hearing by the Environmental Assessment Board.

The proponent may withdraw or amend his Environmental Assessment at any time; however, in certain circumstances the Minister may impose terms and conditions on such withdrawal or amendment (Section 7(3)).

It is legally possible for an undertaking for which an individual Environmental Assessment (EA) is done, to be split into stages. For instance, with regard to a generating station, the first stage could consist of the determination of need for a generating station in a particular area of Ontario, and the selection of the preferred site suitable for alternative types of generating stations. A second stage would deal with the specific need to build within a particular time period, the justification of the particular type of generating station proposed, and station design. The boundaries between these stages could be shifted, and more or fewer stages could be utilised.

Where an overlap might occur between some of the recommendations of the Royal Commission, and the requirements of The Environmental Assessment Act, the legal mechanism exists for full or partial exemption from the requirements of the Act, under Section 30 of The Environmental Assessment Act.

d) Program Environmental Assessments

As agreed by Hydro and the Ministry of the Environment, Program Environmental Assessments will apply to transmission lines and transformer stations in the lower voltage ranges (i.e. below 230kV).

It is expected that Ontario Hydro will prepare a Program Environmental Assessment, for instance for urban transformer stations, which will describe how Hydro goes about planning and constructing them. It will divide them into various categories, taking into account a number of factors such as appearance, adjacent land uses, permanence, whether serving old or new development, size of area affected, etc.

After identifying the range of environmental effects likely to be associated in varying circumstances with the program, the Program EA will develop measures to prevent or mitigate adverse effects.

The Program EA would then be submitted for review, and, if it was determined that it was complete, the EA would be accepted and the proponent given approval to proceed with individual projects within the program, without further environmental assessment, but subject to following the conditions of approval. In effect, the conditions of approval would amount to mandatory environmental procedures for the planning, design, construction, operation and retirement of projects within the program. The conditions may also specify circumstances where an individual EA would be required.

3. THE ENVIRONMENTAL PROTECTION ACT 1971 AND THE ONTARIO WATER RESOURCES ACT

While many of the Sections of these Acts are quoted in various portions of this Submission, it is hoped that the following notes will help to clarify their main provisions.

Introduction

It is proposed to deal with The Environmental Protection Act and The Ontario Water Resources Act, together with their contents, grouped under the following headings:

(a) Provisions for Approvals and Permits.

(b) Waste Management.

(c) Prohibition and Penalties for Contravention.

(d) Control and Direction.

(a) Provisions for Approvals and Permits

The basic purpose of environmental legislation in Ontario is to prevent the pollution of the environment, and wherever possible, to rectify the effects of pollution. Approvals and Permits represent such a preventive function. The following Sections of the Acts are the most significant.

The Environmental Protection Act, 1971

Section 8 requires a Certificate of Approval to be obtained from the Director, before any person may construct, etc. any plant, equipment, etc. which "may emit or discharge a contaminant into the environment, excluding water".

It is not necessary for the Ministry to show that in fact an injurious emission will be or has been discharged. It is sufficient to show that, for instance, an alteration in equipment may emit or discharge that contaminant. The exclusion of water reflects the fact that the Ontario Water Resources Act has adequate provisions for this. The Section also deals with the information required by the Director prior to issuance of a Certificate of Approval.

Section 12 specifically lays down that even in spite of the issuance of such approval, the Director is not prevented from issuing either a control or stop order (defined in Part IX, Sections 70 - 79). If the Director thinks that further controls are necessary, or further investigation shows that contamination to the environment which was not expected earlier is in fact being caused, the Director may, subject to the requirements of the Act, issue these orders at his discretion.

The Ontario Water Resources Act

This Act also has provisions for Approvals and Permits. It is, however, restricted to the control of pollution of Ontario's surface and groundwater, and the control of the taking of water. All other environmental pollution is covered by The Environmental Protection Act.

Section 37(1) states that if over 10,000 gallons of water per day are required, it is necessary to receive a permit from the Director for the taking of water. This has particular significance in Ontario Hydro's situation, since thermal generating stations require great amounts of cooling water.

Section 42, which deals with the necessity of applying for, and receiving approval from the Director for the establishment of sewage works, is also of particular significance to Ontario Hydro, since "sewage" includes industrial wastes, and the warm water discharges from generating stations fall within this category.

(b) Waste Management

The Environmental Protection Act, 1971

The disposal of solid wastes on land is regulated by the Environmental Protection Act, 1971. "Waste" is defined as including ashes, industrial waste, etc.

Section 31 requires a Certificate of Approval from the Director in order to establish or operate a waste disposal site. Where a large waste disposal site for the disposal of hauled liquid industrial waste or hazardous waste, etc, is envisaged, a Public Hearing is a requirement under Section 33, so that the public should have an opportunity for input. Discretionary powers are also given to the Director for lesser waste management systems, or waste disposal systems.

(c) Prohibition and Penalities for Contravention

The prohibition and penal sections of the two Acts are significant, since they set out the terms under which sanctions may be applied.

The Environmental Protection Act

Section 14 is the most significant one dealing with the prohibition of contaminating the natural environment. It forbids the emission or discharge of contaminants which may: contaminate the natural environment; damage property or plant or animal life, or render them unfit for use by man; harm or cause discomfort to any person. Thus, the prohibition deals not only with injury or damage to the environment per se, but also with the possible consequences of this.

Section 5 of the Act, which states that no person shall introduce any contaminant into the atmosphere in excess of that prescribed by Regulations, is a section to cover situations which can be prescribed by regulation and which might not be covered by other more general sections (e.g. Section 14). Sections 14 and 15 require such dischargers immediately to inform the Ministry, so that steps may be taken at once to rectify environmental damage. This has significance where accidents and spills occur.

Section 102 is an all-encompassing penal section of the Act. This Section applies wherever there is no other penal section in the Act. The penalty for an offence is $5,000.00 for each day for the first offence, and $10,000 for each day for every subsequent offence.

The Ontario Water Resources Act

Section 32 is one of the more significant prohibitory Sections. Under it, no person shall discharge or deposit etc. any material into waterbodies that may impair the quality of the water. Penalties are the same as in Section 102 of The Environmental Protection Act, 1971. In addition, the discharger must inform the Minister if an accident has occurred.

Section 33 gives the Director the power to prohibit or regulate the discharge or deposit of any sewage into waterbodies. Penalties are the same as for Section 102 (set out in the preceding page).

(d) Control and Direction

As we have seen earlier, there are provisions for Approvals and Permits; there are specific Sections for waste management; and there are prohibitory Sections and penal Sections by which those who contravene may be punished. Control and direction are effective practical weapons.

The Environmental Protection Act, 1971

Section 6 gives authority to the Director to issue Control Orders and Stop Orders against those who discharge contaminants. Control Orders aim at reducing the amount of the contaminant, while Stop Orders are effective in stopping the addition of a contaminant. Stop Orders, however, are issued only where an immediate danger to human life or health, or danger to property are involved. Sections 70 - 76 give details of these Orders with regard to compliance and contents.

The Minister, under Section 17, may order the discharger of contaminants to repair the damage caused by his actions. It is to be noted that the only requisite for such an Order is the Minister's opinion that it is in the public interest. This is a widely worded Section, and can be very effective when dealing with accidental spills.

The Ontario Water Resources Act

Section 31 gives the Minister the power to supervise surface and groundwaters, and to examine these waters where there is the possibility of pollution. It also gives the power to issue injunctions to prevent pollution. The significance of this is that it is not enough to punish a person for polluting a watercourse, it is much more useful to prevent that pollution.

4. THE PESTICIDES ACT, 1973

The purpose of The Pesticides Act, 1973 is to control the use of chemicals for the destruction of plant and animal pests, and the possible harmful effects of such pesticides. A number of pesticides have been found to have had damaging effects upon the environment, either gradual or drastic. The manufacture of such chemicals is under Federal jurisdiction; the Crown in right of Ontario may only control the use of such pesticides.

The investigatory activities of the Ministry are given legality under Section 2 of the Act. The main prohibitory Section is Section 3. It is very similar to Section 14 of The Environmental Protection Act, 1971, and prohibits the emission etc. of damaging pesticides, (rather than contaminants), to the environment.

As a further safeguard, operators may only perform an extermination upon obtaining the proper license after training (Section 4). Further details on licensing are given in Section 10 of the Act. In making a decision as to licensing, the Director may consider many factors, including past conduct of the proposed operator.

Stop Orders and Control Orders are dealt with in Sections 20 and 21, and have similar conditions to those in The Environmental Protection Act, 1971.

Again similar to The Environmental Protection Act, Section 22 requires the person who has deposited etc. a pesticide damaging to the environment to forthwith notify the Director. With general intentions similar to those of The Environmental Protection Act, Section 23 empowers the Minister to order the person responsible for a pesticide which is damaging the environment, to clean it up.

The penal section of the Act is Section 34, where offenders are liable to not more than $5,000 per day for the first conviction, and $10,000 per day for subsequent offences.

Because of the technical matters which pesticides legislation covers, there are several Regulations under The Pesticides Act; the most significant is Regulation 618/74.

PART B: THE WORK OF THE MINISTRY OF THE ENVIRONMENT

The following Part of this Submission gives a more detailed description of the varied work of the Ministry of the Environment which is relevant to the consideration of electrical power production, transmission and distribution, and in particular to specific activities of Ontario Hydro. The Matrix, as set out in Figure 1, will be used as a basis for the approach taken in this Part of the Submission. Accordingly, the functions of the Ministry of the Environment will be dealt with in the following order: prevention of environmental damage; technical support; monitoring, surveillance and abatement.

The main types of Ontario Hydro projects with which the Ministry of the Environment has dealt with in the past, and with which it will continue to deal, will be borne in mind through the following pages. Such projects include generating stations (hydraulic and thermal, nuclear and fossil fuelled), power transmission lines varying from 115kV to 500kV, and distribution stations. All such projects have very significant effects on the environment, both natural and social.

This Submission will also deal with the Ministry's concerns in matters related to electrical power production. These include: the mining of uranium and disposal of radioactive wastes, contingency planning in case of accidental spills and

emissions in connection with electric power production, the control of pesticides. Other activities of the Ministry, such as the participation of staff in committees dealing with electric energy-related subjects, will also be discussed.

CHAPTER III. THE MINISTRY OF THE ENVIRONMENT PROGRAMS FOR THE PREVENTION OF ENVIRONMENTAL DAMAGE

1. THE ENVIRONMENTAL ASSESSMENT PROCESS

a) Objectives of the Environmental Assessment Program

The Environmental Assessment Program is a significant step in the Ministry of the Environment's strategy for the prevention of environmental damage. The objectives of the Environmental Assessment Program, as set out in the Green Paper on Environmental Assessment, 1973, are:

(1) To identify and evaluate all potentially significant environmental effects of proposed undertakings at a stage when alternative solutions, including remedial measures and the alternative of not proceeding, are available to decision-makers;

(2) To ensure that the proponent of an undertaking, and Governments and agencies required to approve the undertaking, give due consideration to the means of avoiding or mitigating any adverse environmental effects prior to granting approval to proceed with the undertaking.

It should be noted that these objectives make no mention of an environmental assessment document; the emphasis is on the process of decision-making. It is not the environmental assessment document but improved, comprehensive decision-making, which is the real objective of the Environmental Assessment Program. The production of the environmental assessment document is only the means to this end.

The definition of "environment" in this Act is set out in the broadest terms and includes not only the natural environment but also "man" within the environment. This means that an environmental assessment must also take into account social and economic factors, and the broader planning goals of the Province.

b) The Process

Studies are commenced leading towards the production of an environmental assessment document, and eventually recommendations as to the location of generating and transmission facilities. These studies could include: system plans, size and type of facilities, environmental suitability of alternative locations (with environment regarded in its broadest sense, as in the Act), alternative transmission corridor layouts, and their relationship with load centres.

The required contents of an environmental assessment document are set out in Section 5(3) of the Act as mentioned earlier. Guidelines have been prepared, further explaining the content requirement.

Figure 2 (page 33), illustrates the basic environmental planning model which is envisaged in The Environmental Assessment Act. It should be understood that steps 1 to 7 of the model (which precede the implementation stages), may be repeated several times ("iterated") in any given environmental assessment study. For example, with an electrical power transmission line, it might take one iteration to select a preferred "band" within a study area, a further iteration to select a preferred "corridor" within the band, and a third iteration to decide upon the precise alignment within the "corridor". Reference to Appendix 16 will clarify this particular example.

The Environmental Assessment document records the stages by which the proponent, in this case Ontario Hydro, has selected the preferred undertaking. The planning model shown in Figure 3 provides for constant feedback within the process, by which earlier decisions may be re-evaluated in the light of later findings.

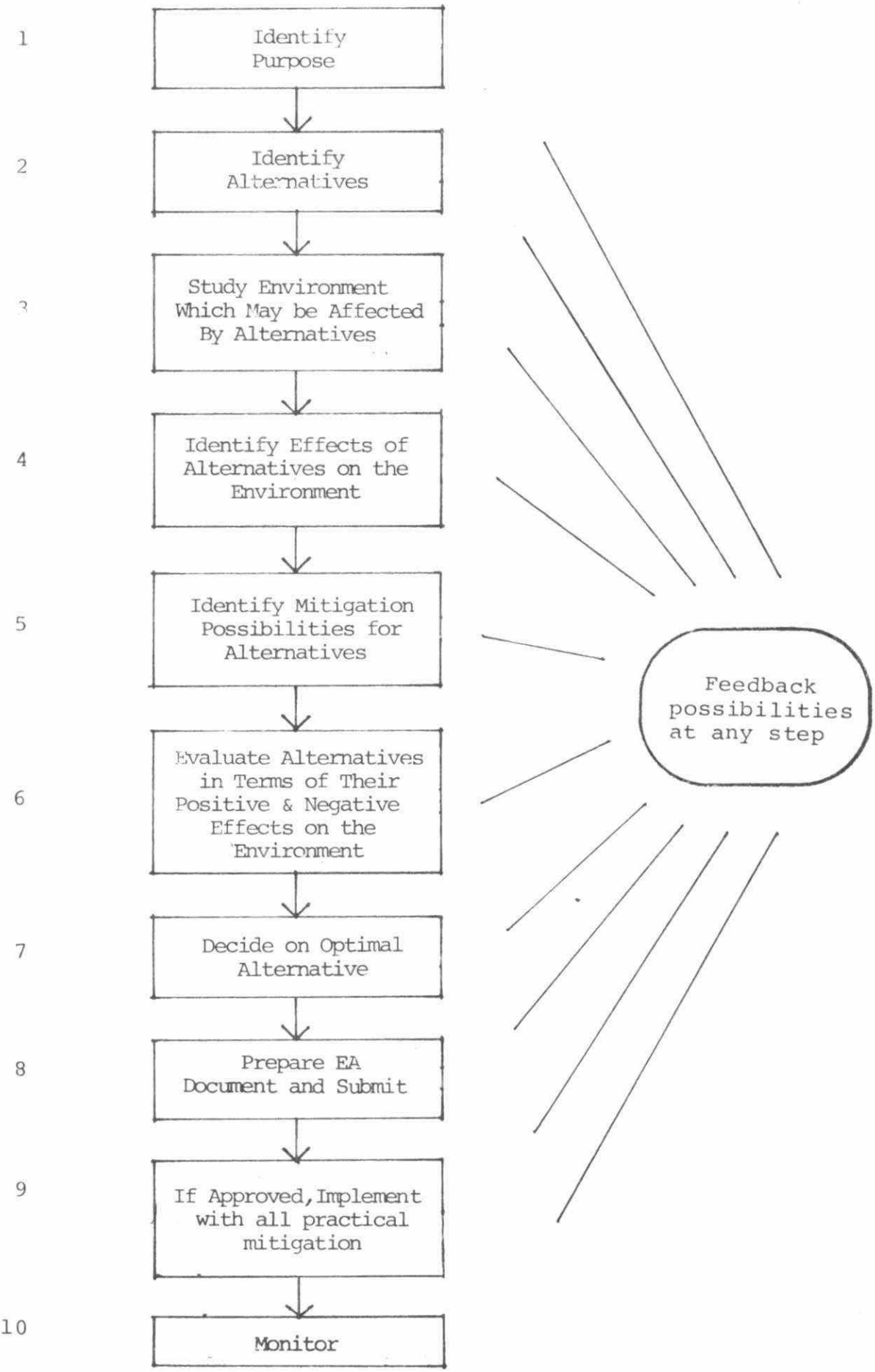
The "rationale" for the undertaking must be identified before further steps are taken: the effects of proceeding with

the undertaking or not doing so, must be evaluated. Within the model shown, steps 3, 4 and 6 illustrate the basic steps of the process, which are iterated throughout the study. They may be described as the Inventory (Step 3), Effects Prediction (Step 4), and Evaluation (Step 6) stages of the study.

It should be pointed out that environmental effects, both short and long term, which are produced as a result of the development of electrical facilities, may be both direct and indirect. The developments themselves may be categorized as either primary or secondary. The development of a new generating station is an example of a primary development, for which it is necessary to consider the effects on the environment, both direct and indirect, of its construction and operation.

The same considerations of direct and indirect effects apply to the secondary development in connection therewith; such secondary development would include developments such as housing, schools, shops, roads, and sewer and water servicing schemes, which would serve Hydro personnel and associated population. It is also possible that, by providing favourable conditions for development, other large industrial concerns might be encouraged to locate in the vicinity.

Fig. 2. BASIC MODEL FOR ENVIRONMENTAL ASSESSMENT PROCESS



c) Methodology

What methodology is appropriate for the undertaking in question? While several different methodologies have been developed and used by Ontario Hydro, the Ministry has steered away from advocating that a specific methodology is the only one appropriate for a given type of project. It is thought that, since each project is unique, and occurs in a unique spatial setting, the methodology should be selected accordingly.

Although the legislation does not make it a requirement, when the proponent recognizes that an environmental assessment is required, it is expected that his first step will be to contact the Ministry of the Environment to discuss, on an informal basis, the matters which should be addressed by the environmental assessment. As an aid to Ontario Hydro, the Ministry of the Environment has prepared Environmental Assessment Study Guidelines for a Generating Station, and for Electrical Transmission Lines (see Appendices 15, 16).

d) Resolution of Conflicts

Although not defined in the legislation, other Ministries with an interest in the undertaking or its implications will be asked to participate in the review of the environmental assessment and to make comments and recommendations.

The Ministry of the Environment will co-ordinate this review. Resolutions of conflict among the Ministerial positions may be achieved at a staff level; the exceptions to this will be resolved in Cabinet.

e) Public Participation

During the preparation of the environmental assessment document, it will be to the proponent's advantage to involve the public. While public participation at this stage is not required by the Act, it can be of great assistance to the proponent both in preparing the environmental assessment document, and in facilitating or expediting its passage through the review process and Public Hearings, if any, before the Environmental Assessment Board. It is our understanding that Ontario Hydro has been carrying out a public participation program for its various projects.

f) Planning for Nuclear Facilities

An Environmental Assessment requires approval under The Environmental Assessment Act before approvals under other Provincial legislation may be obtained. However, this does not apply to those operations which are under the jurisdiction of the Federal Government, notably those involving radioactive materials. Certain administrative understandings have, however, been reached with the Federal Government in this regard.

The Atomic Energy Control Board, a Federal Government body, retains the prime responsibility for the licensing of facilities concerned with the mining, production, handling, use or disposal of radiological materials. The Ministry of the Environment has an arrangement with the AECB to allow for dialogue with regard to certain matters of common concern. The Committees operated by the AECB, on which the Ministry of the Environment has representation, include:

- Reactor Safety Advisory Committee (RSAC),
- Radioactive Waste Safety Advisory Committee,
- Heavy Water Plant Safety Advisory Committee.

The Reactor Safety Advisory Committee has a number of responsibilities connected with the siting, construction, and operation of nuclear generating facilities.

The AECB and the Ministry of the Environment have recently agreed, and informed Ontario Hydro accordingly, that the approval process for new sites for nuclear generating facilities could be better co-ordinated. An administrative arrangement has been presented to Ontario Hydro, whereby Hydro would simultaneously submit an Environmental Assessment to the Ministry of the Environment, and a Site Evaluation Report to the AECB. Each agency would also receive copies of the reports submitted to the other agency. The intention is that the approval process of the AECB and the Ministry of the Environment will be co-ordinated as much as possible, and approvals issued coincidentally.

Where the Ministry of the Environment appears likely to have major environmental concerns in connection with a proposed site, the Ministry may bring these to the Board's attention, either through the RSAC, or through informal administrative channels. The Licensing Directorate of the AECB may thus be made aware by the Ministry of the Environment of potential problems, before the Directorate completes its own review.

Further details of the Ministry's role in dealing with radioactive concerns appear in following portions of the Submission, pages 48, 66 and 74.

g) The Environmental Approvals Branch and Ontario Hydro's Environmental Studies

In co-ordinating the Ministry's reviews and comments on Hydro projects, the Environmental Assessment Section of the Environmental Approvals Branch has had a continuing relationship for some years with Ontario Hydro. In the absence of Environmental Assessment legislation, this activity has taken place by means of an informal environmental review mechanism, set up administratively.

Some of the Hydro undertakings which have been, or are being, dealt with are: 500kV transmission lines such as

Middleport-to-Pickering, Lennox-to-Oshawa, Bradley-to-Georgetown, and Nanticoke-to-London; Pickering "B", Wesleyville, Bruce "B", North Channel, Darlington, and Marmion Lake generating stations; Bruce Heavy Water Plants "B", "C" and "D"; Ontario Hydro's Regional Studies and numerous other projects.

In the last few years, it has become increasingly evident that decisions regarding individual projects cannot be made in isolation from a complex system of decision-making, which includes the whole electric power system. A first step towards this is the Regional Studies Programme initiated by Ontario Hydro.

h) Environmental Assessment Within the General Approvals Framework

The approval process for a new electric power plant, heavy water plant or major transmission line system is an involved long-term process. The acceptance of an environmental assessment is an initial phase, and indicates approval in principle only of the general location and features of the proposed development. There follows a process of detailed review and approval of specific components of the proposed development with regard to design, construction, initial operation (start-up), maintenance, and routine operation. Certain types of projects will require a detailed review and assessment of their decommissioning phase. These various stages will be touched on in the following pages.

Detailed reviews of the environmental acceptability of specific features and/or pollution control equipment in the proposed development involve many groups within the Ministry, in particular the Regional Offices, and the specialized technical support and approvals Branches.

2. INDUSTRIAL APPROVALS PROCESS

a) Introduction

The Industrial Approvals Process is mainly carried out in the Industrial Approvals Section of the Environmental Approvals Branch. It is chiefly concerned with the technical examination and approval (or otherwise) of detailed proposals for industrial plants. In the case of Ontario Hydro, the chief concern is therefore with thermal generating stations and heavy water plants.

The process will take place once the environmental assessment procedures have been satisfactorily concluded, and is based upon powers granted under The Environmental Protection Act 1971, and The Ontario Water Resources Act.

All Ontario Hydro generating stations require the submission of applications as indicated below, and each project must receive Ministry approval prior to construction. The

technical evaluation and appraisal of these applications is carried out by the Industrial Approvals Section of the Environmental Approvals Branch, with input from other Sections and Branches. When a proposal is deemed to be satisfactory, and it is judged that environmental degradation will be minimal, a Certificate of Approval is issued, allowing Ontario Hydro to proceed with the project as outlined in its application for approval.

The proponent (in this case, Ontario Hydro) is required to submit to the Ministry of the Environment applications for approval for the actual environmental control facilities which are to be employed, in order to ensure that releases to the natural environment will comply with standards and objectives set by the Ministry in administering the two Acts. These standards emanate from support Branches such as the Air Resources, Water Resources, and the Pollution Control Branches. They may either be in the form of Regulations, Guidelines and Criteria, or objectives.

The proposed treatment and/or control facilities which are to be provided against air pollution must receive approval from the Ministry. Ontario Hydro must therefore obtain the Ministry's Certificate of Approval, before it can proceed with the construction and the installation of the proposed works. In general, emissions to the environment are dealt with under

three main categories. These deal with the emission of contaminants to atmosphere, discharges of liquid effluents to natural watercourses, and the deposition of solid wastes on land. Applications dealing with each emission are of a technical nature and are site-oriented. They must describe the emission source, and in technical detail, the control facilities proposed in order to ensure compliance with the legislation and Ministerial standards.

b) Air Resources

With regard to atmosphere, applications for approval are to be submitted to the Minister of the Environment under Section 8 of The Environmental Protection Act, 1971, to ensure that the emission of contaminants to atmosphere complies with the terms of the Act, and of Regulations drawn under the Act. Applications are reviewed based on the prohibitions listed in Section 14, so that the facilities will not impair the quality of the natural environment or pose any nuisance problems.

Regulation 15 under The Environmental Protection Act, 1971, lists point of impingement levels for various contaminants which might be released to the atmospheric environment. It also indicates the methods by which these points of impingement are to be calculated, based upon emission rates from the source.

As an example, if a generating station is to be fossil fuel fired, the two main contaminants released to atmosphere would be sulphur dioxide (SO_2), and particulate matter. Ontario Hydro would be required to provide the necesary control facilities to ensure that the concentration of these contaminants beyond the property limits did not exceed the standards set out in Regulation #15.

Because heavy water plants use hydrogen sulphide (H_2S) in the process operations, control facilities are required to ensure that the H_2S concentration beyond the property limit is in compliance with Regulation #15. Periodic upsets in the process operations cause a release of H_2S to the flare system; therefore these facilities have to be designed to take this into account.

c) Water Resources

(i) Water Taking

Since Ontario Hydro power generating stations and heavy water plants use water at a rate greater than 10,000 gallons per day, Ontario Hydro is required, under Section 37(3) of The Ontario Water Resources Act, to make application and receive a permit from the Ministry of the Environment for the taking of water. The review of these applications and the issuing of permits is normally done by one of the Ministry's Regional Offices.

This permit system was established to ensure that a proponent's taking of water did not infringe upon the riparian and groundwater supply rights of other users. This might be especially critical if large quantities of water were to be withdrawn from a lake or stream of moderate size. However, Ontario Hydro has traditionally located its thermal generating stations on large natural bodies of water.

Where water taken by Ontario Hydro is to be used for potable purposes, then, according to Section 41(1) of The Ontario Water Resources Act, an application must be submitted to the Ministry of the Environment to obtain approval of the water treatment system prior to its construction. The purpose of this approval process is to ensure that acceptable water quality is provided to the working staff. If surface waters are to be used as a source of domestic supply, then treatment facilities in the form of filtration and chlorination are required to render the water acceptable for drinking purposes. The degree of treatment may be reduced considerably if the source for potable water is a groundwater supply.

(ii) Liquid Waste Effluents

Where a liquid waste effluent is to be released to a natural watercourse, then according to Section 42 of The Ontario Water Resources Act, an application must be submitted

to the Ministry of the Environment to ensure that adequate effluent control facilities have been provided. In dealing with liquid effluent discharges, it is normally necessary to submit two separate applications, one dealing with the sanitary and/or domestic wastes, and the other with industrial wastes such as cooling water and ion-exchange regenerant waste streams from the water treatment systems.

(iii) Sanitary Wastes

Sanitary wastes at generating station sites are normally treated in sewage treatment plants similar to those employed by municipalities. Plants are reviewed by technical staff to ensure their capability of providing adequate treatment.

The construction of a generating station or a heavy water plant may take about 6 years. During that time the temporary labour force greatly exceeds the stable force that will be required for operating the plants. As a result, drinking water and sewage treatment plants which are temporary and larger, must be provided for the interim construction period to accommodate this expanded work force. The treatment system must therefore have the flexibility of handling a high peak load during the construction period, and a reduced load when construction has been completed, and the treatment systems serve the stable work force.

(iv) Industrial Wastes

Ontario Hydro operations also result in the discharge of industrial wastes. Industrial waste control facilities are the subject of applications and Certificates of Approval which are separate from those for domestic wastes.

Thermal generating stations return massive quantities of cooling water to the natural waterbodies, placing a thermal load on them. Ontario Hydro is required to regulate the temperature of the main discharge waste streams in accordance with Ministry requirements.

Since hydrogen sulphide gas, which is utilized in heavy water plants, is extremely toxic in water (as well as in the atmosphere), extensive control facilities are provided to minimize its release into the sewer systems. Again, the control facilities are the subject of industrial waste applications and require approval prior to construction.

If part of the system for treatment of disposal of wastes proposed in applications for approval submitted under Section 42 of The Ontario Water Resources Act is to be located in such a way as to cross municipal boundaries, a Public Hearing before the Environmental Hearing Board is mandatory before any Certificate of Approval can be issued (Section 43).

In all cases, Section 44 of the same Act allows the Director discretionary powers to hold Public Hearings on applications dealing with waste water treatment systems, where he thinks that public input would be useful in the overall approval process, or if the project is of a size significant enough to have a large impact on a neighbouring community.

d) Land Resources

The disposal of solids on land is regulated under The Environmental Protection Act, 1971. Regulation #824, enacted under that Act, deals with land disposal operations.

Applications dealing with land disposal sites are reviewed to ensure that the wastes will be properly contained on the land, and not become a source of groundwater contamination. Where leaching is expected to be a problem, Ontario Hydro is required to provide leachate collection and treatment facilities, to ensure that this waste does not become a source of water pollution. The method of disposal is also reviewed to ensure that it is carried out in a manner consistent with normal practices.

If the material to be disposed of is a liquid industrial waste and/or hazardous in nature, and the material is to

be disposed of on a continuous basis at a particular site, then according to Section 33a(1), a Public Hearing is mandatory before a Certificate of Approval can be issued. But if the material is to be deposited on land for an interim period only, with final disposition at a later date, the site is considered as a transfer station. Therefore, a Public Hearing is not mandatory but may be called at the discretion of the Director, under Section 33c(1).

e) Sound and Vibration

Sound and vibration is included in the definition of a contaminant under The Environmental Protection Act, 1971. The Ministry's approvals function, described under Section 8 of the Act, is administered through the Environmental Approvals Branch, with input and advice from the Pollution Control Branch, Noise Pollution Control Section.

With regard to electrical generating stations, noise has tended to have little effect on surrounding properties, owing to the large size of generating station sites, and the consequent isolation of the facilities. One of the more serious concerns in assessing possible excessive environmental noise levels, is that of oil-fired turbines provided for stand-by duty at generating stations.

The subject of noise abatement is dealt with together with the other abatement activities of the Ministry, later in this Submission.

f) Radioactive Emissions and Waste Disposal

General

Radioactive air emissions, and aqueous effluents, occur at all stages of the nuclear energy program, as does the need for waste management and disposal systems. Some of the stages at which these occur are: in the course of uranium mining operations, during the manufacture of nuclear fuel, in the operation of nuclear power reactors, and in the storage and disposal of radioactive wastes.

The Federal Government, through the Atomic Energy Control Board, has legal jurisdiction over all matters involving "precribed substances" and nuclear facilities, in the interests of "health, safety and security". A licensing procedure is administered by the AECB, for the separate aspects of mining, production, refining, use, sale or possession of prescribed substances. These substances include uranium, thorium and plutonium.

A jurisdictional overlap appears to exist with regard to the licensing procedure outlined above, in that while the

Ministry of the Environment grants Certificates of Approval in accordance with its standards and criteria, only the AECB, through its licensing procedure, has the ultimate power to ensure compliance.

Nuclear Power Production

Although the AECB retains specific jurisdiction for the licensing of nuclear facilities, the Ministry of the Environment reviews applications on some aspects of generating stations, such as the spent fuel storage bays. The Ministry frequently questions Ontario Hydro on technical aspects of such installations, in an attempt to understand safety and integrity aspects, as well as determine the possibility of potential releases.

Radioactive solid wastes of low or medium contamination are disposed of in concrete structures above ground. Spent fuels are at present stored in water; a well-founded, long-term storage strategy has not yet been established. To some extent, the resolution of this matter turns on a policy decision, as to whether Canada is interested in plutonium extraction or in the production of fuel for fast breeder reactors.

Uranium Mining and Waste Disposal

With regard to mining approvals, licenses are generally granted by the AECB, subject to the applicant meeting the requirements of the regulatory agency (the Province and the Ministry of the Environment). The Ministry of the Environment issues Certificates of Approvals for: air emissions, (Section 8, The Environmental Protection Act and Regulation #15); waste management systems and disposal sites (Section 31, The Environmental Protection Act); liquid effluents (Section 42, The Ontario Water Resources Act). The chemical treatment and control of radium in liquid effluents is required at all active uranium mining operations in Canada.

In dealing with applications, the Environmental Approvals Branch is advised by the Industrial Section of the Pollution Control Branch. A major role is also played by the Provincial Ministries of Health, Natural Resources, and Labour.

Other items on radiological concerns appear on pages 35, 66 and 74.

g) Pesticides

The Pesticides Control Section of the Pollution Control Branch supervises the administration of the Pesticides Act, 1973. Close liaison is maintained with the Pesticides Advisory Committee, which makes recommendations concerning the classification of pesticides according to acceptability and other matters in connection with the regulation of pesticides and those who apply them.

Pesticides are restricted in their use and most users are required to be licensed under The Pesticides Act, 1973, and must obtain licenses in order to apply insecticides in transmission tunnels, line poles, and for the control of biting flies, preservatives to wooden transmission line poles, and herbicides for right-of-way maintenance. Their operatives are required to pass examinations on their work, and on the contents of the Regulations. They are required to be familiar with the group of scheduled pesticides which they intend to use; as well as with the toxicity of pesticides to plants and animals, mixing procedures, safety precautions, identification of the pest organism, and the effectiveness of various products. Training and educational programmes are arranged by the Ministry.

One herbicide (picloram) used by Ontario Hydro right-of-way maintenance department requires a use permit prior to treatment.

CHAPTER IV. THE MINISTRY OF THE ENVIRONMENT'S SUPPORT PROGRAMS (TECHNICAL)

As discussed earlier in this Submission, support functions of a technical nature will be dealt with next, as they relate to electrical power production.

The Air and Water Resources, and Pollution Control Branches support the preventive functions outlined earlier, as well as the environmental control program chiefly centred in the Regional Operations Division. In addition, support functions are provided by the Technical Support Sections and Laboratories which are located in the Regional Operations Division.

1. AIR RESOURCES

a) Introduction

Sections 5 and 14 of The Environmental Protection Act, 1971, contain general prohibitions against discharging contaminants into the natural environment. In regard to the prevention of air pollution, Regulation #15 passed under this Act is the most applicable. Regulations passed under the Act have themselves the force of law, (in contrast with the Guidelines and Criteria for Water).

b) The Air Resources Branch

The Air Resources Branch provides many of the assessment services necessary to achieve the control of man's impact on the air environment by monitoring contaminant levels, and providing research and development efforts to ensure acceptable air quality throughout the Province. Enforcement and surveillance activities are carried out by Regional Operations.

The Air Resources Branch is divided into five sections: Criteria Development and Program Planning, Air Quality and Meteorology, Vehicles Emissions, Phytotoxicology, and Technology Development and Appraisal. The Branch, in conjunction with the Ministry of Health, is responsible for evolving guidelines and legally enforceable standards for all air contaminants emitted in the Province. In support of this work, air quality data are gathered and processed, special studies and research are undertaken, and new technologies are examined.

c) Air Quality Management

Air Quality Management in Ontario is based on published ambient air criteria, derived from the observed effects of contaminants on humans, animals, vegetation, and property. In order to meet these criteria, the Ministry has developed legally enforceable standards which are set such that, in theory, the air quality criteria will not be exceeded.

These criteria are developed by the Environmental Air Standards Committee, which consists of personnel from various Sections of the Ministry, and from the Ministry of Health. With the establishment of the Advisory Council on Occupational and Environmental Health, these criteria are reviewed by this Council prior to their final approval by Cabinet, and incorporation in the Regulations.

While the degree of control exercised in applying the policy of air quality management is tailored to individual situations, each case must meet the same standards, at the point of reception, (the "point of impingement"). The point of impingement is the location at which the emission is intercepted by some relevant part of the environment, usually the earth's surface. Regulation #15 under The Environmental Protection Act, 1971, lists the maximum allowable concentrations at the point of impingement, and describes the methods of calculation, which include consideration of variations in wind speed, atmospheric stability, and the rate and height of emission, all of which affect ground level concentrations.

In heavily built-up areas, where there are multiple sources, controls on emissions in order to meet point of impingement standards must be tighter than those in remote areas. Three areas have received particular attention: Toronto, Sarnia and Nanticoke. In all three, Ontario Hydro has large

thermal power plants, and they are therefore subject to special guidelines. Thus in Sarnia, at the Lambton Station, a design concentration restriction of 0.05 ppm SO2 has been in effect since 1970 (see Appendix 8). This has necessitated the use of an intermittent control strategy based on daily estimates of air pollution potential. A similar control strategy has been used at the Lakeview generating station near Toronto. In addition, Hydro, like all other emitters, is subject to special fuel use restrictions employed in the Toronto area (see Regulation #17). With regard to allowable emissions at Nanticoke, guidelines are currently being formulated.

d) Guidelines for Thermal Generating Stations

"The proposed Guidelines for Thermal Generating Stations" (Appendix 7), which have been applied for several years by the Ministry, represent an attempt to supply "a progressive series of design standards which allow Ontario Hydro to make plans based on the anticipated development of a Region."

The Guidelines allow Hydro to plan for operations to meet foreseeable demands on the air resource, and thus help prevent situations where technology would otherwise have to be changed subsequent to a plant's construction. They are based on ambient air conditions likely to arise within a radius of 30 miles of a generating station, and it is recommended that new thermal stations not be located within 30 miles of existing generating stations.

e) The Ontario Air Pollution Index

The Air Pollution Index was established to give warning of, and to prevent the adverse effects of, the building up of air pollution. It is calculated for Toronto, Hamilton, Sudbury, Windsor, Niagara Falls, Coniston and Welland. The Index incorporates hourly measurements of the two most common pollutants which, to date, have been associated with permanent impairment to human health, namely, sulphur dioxide and suspended particulates.

Data on the Air Pollution Index are released at regular intervals to the media. They form the basis for an emergency control strategy which may require specific large air pollution sources to cut back on their emissions at such times as the A.P.I. reaches what are deemed "unacceptable levels", and meteorological forecasts indicate that the situation is likely to persist. The particular pollutants represented in the Index are ones which are associated with thermal generating plants. Ontario Hydro generating plants in Windsor and Toronto are incorporated into this strategy.

f) Research and Special Studies

Areas of current research with relevance to Ontario Hydro are as follows:

- Particulate pollution in the Hamilton/Nanticoke area: joint project with Ontario Hydro and McMaster University;

- Plume concentration profiles in the Nanticoke area: joint project with Ontario Hydro;

- Remote monitoring of aerosol behaviour in plumes: joint project with McMaster University;

- High stack plume profiles;

- Sulphur dioxide removal from stack gases (review);

- Collection of fly-ash from low sulphur coal (review);

- Coal gasification processes (review);

- Utilization of wood wastes and refuse for energy production;

- Toronto District Heating Study - possibility of utilizing municipal garbage to supply the Toronto District Heating Plants.

2. WATER RESOURCES

a) Introduction

Thermal electricity generation in Ontario, either fossil or nuclear fuel, accounts for about 10,000MWe (megawatts electrical) of the total generation capacity of 18,500MWe. At present there is, either under construction or in the approvals process, an additional thermal electric capacity of 20,000MWe.

Development to their full engineering potential, of sites containing existing power plants or where plants are already under construction or in the approvals process, could provide a further 20,000MWe capacity. Full development of the five "energy centres" (North Channel and four others) considered as priority projects in Ontario Hydro's Preliminary Submission to the Royal Commission on Electric Power Planning, would result in a further 60,000MWe of potential thermal generating capacity.

Therefore, existing and future power plant development under the review of the Royal Commission could result in a thermal electric generating capacity on the Ontario side of the Great Lakes of up to 109,000MWe or eleven times the present installed capacity. Such generation would require a cooling water flow of approximately 200,000CFS, roughly equivalent to the outflow of the Upper Great Lakes at the St. Clair River.

b) Effects of Waste Heat

Conventional thermal generating stations reject as waste heat from 50% to 71% of the thermal energy produced into a receiving body of water. The energy content of the waste heat produced by a thermal electricity generating station is 125% to 240% of that of the electrical energy produced. Unless emphasis were given to the development in this Province of large scale methods of waste heat utilization, such as district heating, industrial steam usage or greenhouse agriculture, it would appear that it will be necessary to dispose of increasingly large amounts of heat energy to the Great Lakes.

There has been a good deal of both technical and non-technical discussion with regard to the environmental effects of waste heat discharge to lakes and rivers from thermal power plants. One aspect of water pollution which has created much argument is the question of the detrimental or beneficial effects of waste heat on aquatic ecosystems.

Evidence from environmental studies at operating thermal generating stations, in Ontario and elsewhere, indicates that the discharge of large quantities of waste heat has resulted in significant effects to the aquatic ecosystem.

c) Requirements for Thermal Generating Stations

The Ministry of the Environment is responsible for the regulation of water taking by thermal power plants, and of their thermal and related water-borne discharges, either fossil or nuclear fired.

The general policy upon which the Ministry's approval approach has been based is that environmental damage be minimized, but that the siting of thermal electric generating stations on the Great Lakes can take advantage of the capacity of these lakes to accept and dissipate waste heat from the power generation process. This capacity may be utilized provided that such use does not contribute to the deterioration of the quality of the aquatic environment or interfere with other water uses. If, in the view of the Ministry, effects resulting in such deterioration are found to occur or can be predicted to occur, appropriate remedial measures will be required and implemented.

Water resources program planning and development, together with the setting of standards, criteria and objectives, is both a Head Office and Regional function of the Ministry. The Ministry's criteria for receiving-water quality are contained in the publication "Guidelines and Criteria for Water Quality Management in Ontario", published in 1971, (see Appendix 10). The criteria were developed over a three-year period by an

inter-Branch Committee of the Ontario Water Resources Commission, a predecessor of the Ministry of the Environment, and involved a review of the latest available technical findings in the literature, as well as consultation with a number of Canadian experts on criteria for various uses. The criteria are a set of numerical and descriptive characteristics, applicable to each major water use, which should be met to ensure that the water is suitable for that use.

In the course of 1976, it is expected that a review of the publication will be initiated. This will involve a review and revision of specific findings. To date, receiving water quality standards (as opposed to Guidelines or Criteria), have not been established. However, as part of the above-mentioned project, the issue of water quality standards will be thoroughly reviewed.

In permitting the taking of the large quantities of water necessary for thermal power plant cooling purposes, the Ministry applies its Guidelines and Criteria for the Protection of Fish, Other Aquatic Life and Wildlife, with respect to water temperatures and other factors in receiving bodies of water. Further supplementary Guidelines were established in 1971 to assist in the site selection and approval of thermal power plants, (see Appendix 10). In 1975, these supplementary Guidelines were revised, and will be applied to power plants now

in the approvals process, and scheduled for operation after 1981 (see Appendix 11, "Criteria and Guidelines for Waste Heat Discharges to the Great Lakes System - 1975").

d) Assessment of New Thermal Generating Station Developments

The basic principle of management and control of the environmental effects of future power plants is the review, on a case-by-case basis through the formal environmental assessment process, of potential new sites for power plants. In regard to the potential effects of the project on the aquatic environment, the information used in the assessment of possible sites for future thermal electric power development may be obtained by following the Water Resources Branch Site Selection Study Guidelines (see Appendix 12).

Case-by-case analysis of potential power plant impact on the aquatic environment permits the integration of environmental design and location which, it is hoped, will minimize adverse environmental effects. In the past, this management approach has resulted in temperature restrictions on thermal effluents, designs to reduce entrapment of fish in intakes, procedures to reduce the levels of cooling system biocides in cooling water and, in one instance, the selection of an alternative site for a major power plant. This management approach will be continued in the future.

The present state of knowledge regarding the effects of power plant cooling systems on the aquatic environment has resulted in the establishment of the above-mentioned revised Criteria and Guidelines for future power plant developments. One of the chief concerns is the potentially serious damage to the fisheries if discharge to the littoral zone of the Great Lakes is not very carefully controlled.

Detailed investigations are being undertaken to refine the data base on the long-term effects from existing power plants, and to determine if further pollution control measures or environmental safeguards are required at either existing or future power plant developments. Scientific studies of the aquatic environment round each new power plant developed by Ontario Hydro have been a required part of approval in principle of a plant by this Ministry for a number of years. Studies are required to be done at all stages of the project: pre-construction, pre-operational, and operational. Based on these studies, and on Ministry review of thermal discharge effects and technological developments, revisions may be made by the Ministry of thermal discharge criteria and guidelines, and requirements for additional pollution equipment may be established.

e) Hydraulic Electrical Generating Stations

The three forms in which future hydraulic generation is likely to occur are: run of river, peaking (intermittent), and pumped storage plants. Each form of hydraulic plant will require an environmental assessment under The Environmental Assessment Act, 1975. In evaluating these "assessments" and later more detailed proposals with regard to potential effects on water, reference will be made to the appropriate Water Quality Guidelines and Criteria, as mentioned above.

f) Research and Special Studies

The Ministry, besides requiring studies by Ontario Hydro, is involved directly in the study of the environmental effects of cooling water discharges from several power plants. The Nanticoke project, a co-operative effort to study the environmental impact of a large urban-industrial development, has focussed considerable effort on the study of the impact of the 4,000MW coal-fired Nanticoke generating station. Aspects investigated by this Ministry include: water quality, phyto-plankton, and bottom fauna investigations. In addition, studies are carried out at the Bruce Nuclear Power Development on remote sensing of thermal plumes, and the effects of waste heat discharge on benthic invertebrate populations.

3. LAND RESOURCES

The Ministry's programs to protect the land are to a large extent bound up with those for water protection, since a great deal of land pollution ultimately ends up in either ground or surface waters.

a) Fly Ash

As stated above, applications for the approval of solid waste disposal sites, including those for fly ash, are processed by the Environmental Approvals Branch. Support functions are performed by other Branches including the Water Resources, Air Resources, Pollution Control and Resource Recovery Branches, as well as the Regional Offices.

b) Pesticides

Ontario Hydro's use of pesticides, including herbicides, is particularly significant in the Province, because transmission rights-of-way are regularly treated with these substances.

Preventive (licensing), support and monitoring functions are carried out by the Pesticides Control Section of the Pollution Control Branch. Support activities to the licen-

sing functions of the Branch include: policy and program development activities, training of operatives, and liaison with the Pesticides Advisory Committee.

4. URANIUM MINING AND WASTE DISPOSAL

As stated earlier, environmental control at Ontario uranium mining operations is legally under Federal Government jurisdiction. However, the Federal Government, in issuing a license, normally requires the operator to abide by the requirements of Provincial authorities.

The Industrial Section of the Pollution Control Branch has prepared "Effluent Guidelines and Receiving Water Quality Objectives for the Mining Industry in Ontario", (see Appendix 13). These set an effective limit on the amounts of specific contaminants which may be present in waste flows from uranium mine-mill properties. "Environmental Design Considerations for Ontario Mining Operations" (see Appendix 14), prepared by the same Branch, contains a series of Guidelines to ensure that abandoned mining lands are revegetated, that waste water is reused to the maximum extent possible, that mining chemicals are safely stored and wisely used, and so on.

The Ministry at the present time has certain standards considered acceptable for the protection of fish and other

aquatic life. These include:

1. Gross Beta Emitters - 1,000 picocuries per litre,
2. Radium 226 - 3 picocuries per litre,
3. Strontium 90 - 10 picocuries per litre.

The Ministry is also attempting to have standards set for thorium 227, thorium 228, thorium 230, thorium 232, and lead 210. This standard setting is carried out by the AECB with the assistance of the Ministry's representative on the Uranium Mining Safety Advisory Committee.

Other items on radiological matters appear on pages 35, 48 and 74.

5. SOUND AND VIBRATION

The Ministry's Approval function is discussed in the first part of this Submission. Support functions are fulfilled in the Noise Pollution Control Section of the Pollution Control Branch. The Section develops plans, policies and programs, and provides technical support; (also abatement and enforcement). Regulations have not been prepared and passed with respect to sound or vibration under The Environmental Protection Act. However, "Approvals Guidelines for Potential Noise Sources", and "Guidelines for Submissions regarding Land Use Planning with Respect to Sound and Vibration" have been produced, against which proposed projects are assessed.

A series of technical noise pollution control publications with respect to standards, procedures for measurement and reporting, emission limits, etc. has been issued by the Ministry as support documents for the Model Municipal Noise Control By-law.

Control and abatement functions, which are dealt with later in this Submission, are carried out by the Noise Pollution Control Section in conjunction with the Legal Branch.

CHAPTER V. THE MINISTRY OF THE ENVIRONMENT'S PROGRAMS FOR ENVIRONMENTAL CONTROL (MONITORING, SURVEILLANCE, ABATEMENT)

1. INTRODUCTION

The Ministry's Environmental Control Program includes monitoring and surveillance, abatement and feedback; these functions are primarily the responsibility of the Ministry's Regional Offices.

Industrial Abatement Sections within the Regional Offices are responsible for the abatement of pollution caused by the activities of industrial users, including Ontario Hydro. Public complaints are investigated, on-site surveillance and inspection is provided, Control Orders are issued, and legal action taken if necessary. Industrial spills, whether of oil in transit to oil-fired generating stations, or of radioactive materials or other types of contaminants in connection with nuclear generating stations, are also dealt with by these Sections.

The Technical Support Sections of the Regional Offices provide skilled technical assistance to the Environmental Control Program, monitor emissions and effluents, and provide feedback both to their own Regional Offices, and to Head Office groups.

2. MONITORING AND SURVEILLANCE OF GENERATING STATIONS PRIOR TO COMMISSIONING

Monitoring and surveillance at non-hydraulic power projects commence at the construction stage, when visits to the site are made to ensure that the facilities approved for pollution control are properly installed. Any deviation noticed is brought to Ontario Hydro's attention, and corrections are made accordingly.

During start-up, visual observations are made of stack plume opacity; noise level measurements are made of steam blow-off; samples of any unusual liquid effluent are collected and analysed before discharge is authorized (for example, boiler cleaning solutions). Any results which exceed the Ministry of the Environment Guidelines or Criteria etc. are conveyed to Ontario Hydro immediately, and in conjunction with Ministry staff, measures are taken to ensure compliance.

3. MONITORING AND SURVEILLANCE OF GENERATING STATIONS AFTER COMMISSIONING

a) Air

Normal monitoring and surveillance commences when the generating station is commissioned. Through negotiated agreement with Ontario Hydro, ambient air monitoring stations are

provided. The number and location of these is dependent upon the type, size and location of the power station. These facilities continuously measure and record SO2 (sulphur dioxide) levels, and are equipped with dustfall jars to measures particulate levels.

Where adequate meteorological information is not available for the immediate area, Ontario Hydro is required to construct and operate facilities to provide the necessary information. In most cases, this consists only of a suitably located wind gauge. Data from all instruments, and results of all major sample analyses, are reported monthly to the Ministry. Spot checks are made by Ministry staff to ensure that data are not being manipulated.

Ontario Hydro is also required to analyse regularly, for sulphur content, fossil fuel as received to ensure continuous compliance with the approval for the type of pollution control equipment installed. These results also are reported regularly to the Ministry. Whenever Provincial officers are in the vicinity, spot checks are made of plume opacity. When operational upsets occur, notification by telephone to the Ministry, together with details of action to be taken immediately, must be provided by Ontario Hydro with confirmation by letter. This is required by Sections 13(1) and 15(1) of The Environmental Protection Act, 1971.

b) Water

With regard to the water environment, once the power facility is fully operational, Ontario Hydro is required to undertake and report the results of a minimum of three years of survey work of the physical, chemical and biological characteristics of the receiving waters. Appropriate terms of reference, and the extent of the studies, are as required by the Ministry. Within the past year, the Ministry of the Environment has developed a list of parameters which should be monitored by Ontario Hydro on a regular basis, at both fossil and nuclear generating stations. The acceptability of some of these parameters to Ontario Hydro has not yet been resolved.

The data and results obtained from these surveys are compared with the pre-operational mode. If significant potentially serious changes appear to be occurring, the operating methods at the power facility must be altered to reduce the change to acceptable levels. Where such an operating change is directed, the study period is extended to ensure that the effect is as desired. At regular periods after this time, Ministry field staff undertake sampling and examination of biota, to ensure that no subtle long-term changes are taking place.

All liquid waste streams are monitored by Ontario Hydro and the results reported to the Ministry. Here again, spot

checks are made by the Ministry staff to ensure compatibility of laboratory and sampling techniques. Wastes from the boiler water treatment plant are "composite-sampled" weekly for suspended and dissolved solids and pH. The boiler cleaning (acid) materials are neutralized, and the resultant liquid retained and sampled, to ensure correct treatment before release.

Where domestic (sanitary) wastes are treated on-site, the treatment facility is visited regularly to ensure that its performance is at an acceptable level. Records of cooling and tempering water are maintained by Ontario Hydro, and provided monthly to the Ministry. Minimum, maximum and average daily volumes are provided, as well as before and after tempering. The wash water from the air preheaters at fossil-fueled stations is treated for heavy metal removal, stored and sampled before discharge is approved by Ministry staff.

As required by Section 32(3) of The Ontario Water Resources Act, all plant upsets which would affect the liquid waste streams are reported to the Ministry of the Environment field staff by telephone when they occur, and remedial action (where applicable) must be undertaken immediately by Ontario Hydro.

Fish mortality at the cooling water inlet screens remains a problem. Attempts are constantly made to reduce the

numbers of fish reaching the screens, and to provide an effective screening mechanism which will not cause fish deaths. In addition, the chlorine used as a slimicide must be carefully controlled, to ensure that its level is suitable to fish which might be in the effluent plume. Rapid temperature changes, and the possibility of excess nitrogen gas entrainment in the effluent plume, are also operational problems. They must be resolved at each power station, as experience is gained in operating modes, fish attractiveness and actual - as opposed to theoretical - plume dispersal in the receiving waters.

c) Fly Ash

Inspections are made by the Ministry staff about four times per year, of the sites where fly ash from fossil fired generating stations is disposed of, to make sure that no untoward situations develop. In order to prevent wind-blowing, fly ash disposal sites require to be watered.

3. RADIOLOGICAL MONITORING

The Regional operations of the Ministry of the Environment carry out radiological programs in a number of different areas. These programs include periodic sampling at nuclear generating stations, and in a number of mining and processing areas, such as Port Hope, Bancroft and Elliot Lake. The

Ministry's monitoring program is carried out on a regular basis, and the results given to the Atomic Energy Control Board for analysis and interpretation. Other items on radiological matters appear on pages 35, 48 and 66.

5. TRANSMISSION RIGHTS-OF-WAY

Regional staff inspect transmission right-of-way corridors while these are under construction, to ensure that minimum damage is caused to the natural environment. Field inspections are also carried out at the time that pesticides and herbicides are applied to the rights-of-way.

6. SOUND AND VIBRATION

Control and abatement functions are generally carried out at the Regional level in conjunction with the Legal Branch of the Ministry.

CHAPTER VI. OTHER MATTERS

1. THE RESOURCE RECOVERY PROGRAM

a) Introduction

The role of the Resource Recovery Branch is "to develop and implement a comprehensive waste management program for the conservation and recovery of resources".

In 1974, municipal expenditures of $70M were reported for the management and disposal of municipal solid waste in the southern half of Ontario. An estimated 5 million tons of solid waste were generated by a population of 7 million at a waste generation rate of 4 pounds per capita per day. This represents municipalities which account for 85% of the Province's population.

By 1995, with a stable solid waste generation rate, 7 million tons would require disposal. With an increase of 4% generation per annum in solid waste, that level would be reached by 1980 and by 1995, solid waste would increase to 16.2 million tons. Clearly waste management cannot be accomplished by resource recovery alone under these circumstances.

b) Energy Analysis of Resource Recovery Options and Systems

The energy analysis of Resource Recovery Options has been undertaken by the Ontario Research Foundation for the Ministries of Energy and Environment. The purpose of this analysis is to illustrate the potential net energy to be derived from processing municipal solid waste to recover materials and a certain fraction as fuel. The energy input for processing waste is approximately 700,000BTU per ton of waste. A comparison of four options to recover energy from waste is shown in Figure 3, below.

Fig. 3. Energy Recovery Efficiencies

	Process	Energy Product	Net Fossil Fuel Savings*
1.	Incineration Unsegregated refuse	Steam	12.66 BTU
2.	Shredding Segregation and burning in a coal fired generating station	Electricity	14.69 BTU
3.	Shredding Segregation and burning burning in a cement kiln	Direct Heat	15.32 BTU
4.	Slagging Pyrolysis - Andco Torrax	Steam	14.54 BTU

* By utilizing one tonne of newspaper x 10^6

On the basis of energy savings relative to efficiency of conversion, a "refuse-derived fuel" (R.D.F.), can be most effectively utilized in a cement kiln. However, since the overall process energy required to produce refuse-derived fuel for use in a cement kiln is the same as that for a generating station, there is greater potential for using municipal waste as a source of energy at thermal generating stations because of the higher fuel demand.

Since thermal generating stations and other energy intensive industries such as the cement industry require more energy than can be supplied from municipal solid waste, it is possible to select fuel users for refuse-derived fuel , which will minimize transportation and system costs. Initial efforts will be directed toward the use of refuse-derived fuel by Hydro's thermal generating stations if the Watts from Waste demonstration project is successful, and by the cement industry.

c) A Provincial System of Resource Recovery Plants

To facilitate the development of a Provincial network of resource recovery plants, a Provincial Systems Model has been developed to find a feasible set of plants relative to a number of potential markets for refuse-derived fuel. The basic constraints of the model are: the amounts of waste in the 25 areas chosen as sources of municipal waste (1980 population), annual

operating costs, transfer station costs, transportation costs, and landfill disposal costs.

The potential markets for R.D.F. are:

1. Ontario Hydro,
2. Cement Plants,
3. Industrial Facilities (Steam).

The initial outcome of the model, in considering the basic parameters of plant operating cost, landfill cost, transfer station cost and a revenue for refuse-derived fuel of $12.00 per ton, directed 2.8 million tons of refuse-derived fuel to four of the six thermal generating stations considered, five of the six cement plants considered, and all of the five heat recovery plants considered.

The effective use of 2.8 million tons of refuse-derived fuel would reduce the fuel requirements of those markets supplied by 1.3 million tons of coal. Not included is an economic analysis of ferrous metals and their attendant reduction in landfill and energy requirements as a recycled input to existing industrial processes. Overall, the reduction of impact both direct (landfill), and indirect (energy economies), can be accomplished at a cost consistent with present public expenditure on solid waste disposal.

Fig. 4. SYSTEMS MODEL FOR RESOURCE RECOVERY PLANTS

LOCATION	PLANT CAPACITY		REFUSE INPUT		PROCESS ENERGY		RDF FUEL	
	TPD	TPY	BILLION BTU	TONS COAL	BILLION BTU	TONS COAL	BILLION BTU	TONS COAL
WINDSOR	1300	325000	3250	125000	250	9633	1950	75000
LONDON	2000	500000	5000	192308	385	14820	3000	115385
KITCHENER	2000	500000	5000	192308	385	14820	3000	115385
ST CATHARINES	1450	362500	3625	139423	279	10745	2175	83654
HAMILTON	2000	500000	5000	192308	385	14820	3000	115385
BRAMPTON	2000	500000	5000	192308	385	14820	3000	115385
ETOBICOKE	2000	500000	5000	192308	385	14820	3000	115385
TORONTO	2000	500000	5000	192308	385	14820	3000	115385
NORTH YORK	2000	500000	5000	192308	385	14820	3000	115385
SCARBOROUGH	2000	500000	5000	192308	385	14820	3000	115385
BELLEVILLE	1500	375000	3750	144231	289	11115	2250	86538
CORNWALL	364	91000	910	35000	70	2697	546	21000
OTTAWA	1800	450000	4500	173077	347	13338	2700	103846
TOTAL	22414	5603500	56035	2155192	4318	166088	33621	1293115

NOTES:
1. HEATING VALUE OF REFUSE DERIVED FUEL = 6000 BTU/LB
2. REFUSE DERIVED FUEL IS 50.00 PERCENT OF RAW REFUSE INPUT
3. HEATING VALUE OF RAW REFUSE = 5000 BTU/LB

Figure 4 identifies 13 processing plants with capabiities of handling 5.6 million tons of municipal waste. In additon to the recovery of refuse-derived fuel, approximately 280,000 tons of ferrous scrap would be recovered for reuse. As technology develops, there is a potential of recovering other materials such as glass and aluminium as listed below, Figure 5.

Fig. 5. WASTE COMPOSITION

The average composition of the solid waste stream is

Paper and Cardboard	37 %
Food Waste	19 %
Vegetation	18 %
Plastic	3 %
Rags	3 %
Wood	2.5 %
Miscellaneous	1.5 %
Total Combustible	85 %
Glass	7 %
Cans (Ferrous)	5.6 %
Cans (Non-Ferrous)	0.7 %
Miscellaneous	1.7 %
Total Non-Combustible	15 %

Fig. 6. ENERGY VALUE IN SOLID WASTE

	Raw Refuse	Combustible Fraction	Combustible Fraction with Drying
	Higher Heating Value in BTU's per Pound		
As received	4850	5400	6700 - 7000
Bone dry basis	6460	7470	7470 - 7770
Moisture content	25 percent	28 percent	10 percent

d) Watts from Waste Demonstration Project

Under an agreement with Metropolitan Toronto, Ontario Hydro will examine the feasibility of using R.D.F. as a partial replacement for coal in a boiler at Lakeview generating station. The Ministry of the Environment is providing financial assistance for this. The project will proceed in two phases, with Phase I expected to commence late 1978, and if this is successful, Phase II to proceed later with essentially double the throughput of Phase I. This project, which has been named Watts from Waste, will process 210,000 tons of Metro Toronto's solid waste, and deliver 130,000 tons of refuse-derived fuel to the Lakeview generating station, (see Figure 6). The R.D.F. will initially be used in only one boiler, replacing 10 - 15% of the coal. Each ton of R.D. F. will replace about 0.44 tons of coal which is presently valued at $30.68 per ton delivered at Lakeview G.S.

Fig. 6. Impact of the Watts from Waste Demonstration

	Raw Waste	R.D.F.	Replacement
Phase I	210,000 tons	130,000 tons	57,200 tons of coal
Phase II	420,000 tons	260,000 tons	114,576 tons of coal

Potential resources recovered are:

	Phase I	Phase II
Raw Waste	210,000 tons	420,000 tons
Ferrous Metal	9,360 tons	18,720 tons
R.D.F.	130,000 tons	260,000 tons
Total Recovered Materials	139,360 tons	278,720 tons

If the demonstration is successful, other thermal generating stations which are equipped to burn coal could be converted in future to take a 10% refuse-derived fuel replacement.

2. CONTINGENCY PLANNING FOR SPILLS AND DISCHARGES OF CONTAMINANTS

a) Introduction

Contingency planning for these emergency situations relates both to the Preventive and Abatement functions of the Ministry of the Environment. Legislation requiring those responsible for such contamination immediately to notify the Ministry is contained in Sections 15(1) of The Environmental Protection Act, 32(3) of The Ontario water Resources Act and 22 of The Pesticides Act.

As far as Ontario Hydro's operations are concerned, the most significant potential contaminant spills which are associated with generating stations are: fuel oil of oil-fired generating stations, radioactive wastes emanating from nuclear stations, and hydrogen sulphide emissions from heavy water installations. Other significant potential spills of contaminants are spills of transformer oils at generating or distribution stations.

b) Spills of Hazardous Substances

Section 14 of The Environmental Protection Act prohibits the emission or discharge of contaminants into the natural environment. Hazardous substances include solids, liquids, gases, odours and radiation that may adversely affect the environment, health or safety of the public.

The Province of Ontario Contingency Plan for Spills of Oil and Other Hazardous Materials has been established in order to deal with emergency spills. The Ministry of the Environment is the lead agency, and the plan is co-signed by five other Provincial Ministries, as well as the Federal Ministry of Transport and Department of the Environment.

Spills are reported to the Regional Offices of the Ministry on a 24-hour, 7-day week basis. The Ministry encourages the discharger to contain and clean up spilled materials as quickly as possible in order to minimize an adverse environmental impact and inspects the spill site as quickly as possible to ensure compliance with our requirements. The Ministry will resort to the issuance of a Ministerial Order under Section 17 of The Environmental Protection Act and/or the invocation of the Provincial Spill Contingency Plan mentioned above if the discharger is reluctant or unable to mount an adequate countermeasures response dictated by the circumstances of the particular spill.

c) Spills Associated with Nuclear Generating Stations

(i) By Order-in-Council OC1487/75, various Provincial Ministries have been designated to take responsibility for co-ordinating the response of the Government of Ontario to various types of emergency situations, with the assistance of other Ministries and Agencies of Government as may be required. These are as follows (part):

Designated Ministry	-	ENVIRONMENT
Responsibility	-	Spills of chemicals, oil, or other contaminants or toxic agents; gas or pipeline breaks.

Designated Ministry	-	HEALTH
Responsiblity	-	Epidemic;
	-	Nuclear Reactor Accident with off-site effects;
	-	Heavy Water Plant Accidents with off-site effects.

(ii) The Ministry of Health's Off-Site Contingency Plan for the Pickering nuclear generating station reflects the responsibilities as set out in the Order-in-Council, with the Ministry of Health playing the lead role. The Ministry of the Environment, among other Ministries and Agencies, plays a supporting

part only, in the Control Group and the Survey Co-ordinating Group set up under the Plan. The Ministry of the Environment has responsibilities for sampling air, water, and soil and for supplying the data to Health. It also gathers information on the possible dispersion of pollutants to the air and water. A similar Contingency Plan has been prepared for the Bruce generating complex.

(iii) The function of developing or reviewing Contingency Plans for spills relating to substances or facilities other than those referred to above, is performed by the Contingency Planning Section of the Pollution Control Branch of the Ministry of the Environment. In-the-field action is the responsibility of the Ministry's Regional Offices.

3. MISCELLANEOUS ACTIVITIES OF THE MINISTRY IN CONNECTION WITH ELECTRICAL POWER PRODUCTION

Staff of the Ministry of the Environment participate, and have participated, in many activities, both formal and informal, which are relevant to a review of the Ministry's work in connection with electrical power production. Some of the main activities, and Committee and Board memberships held by the Ministry, are listed on the following pages.

a) Ontario Hydro's Project External Teams

The Ministry of the Environment has been, and continues to be represented on the various External Teams set up by Hydro to give advice on the studies carried out by Ontario Hydro for proposed transmission line and generating station projects.

b) Solandt Commission

The Ministry participated fully in the public processes of the Solandt Commission, in connection with the Middleport-to-Pickering and Lennox-to-Oshawa transmission line projects. The Ministry submitted several Briefs and gave evidence at various times before the Commission.

c) External Advisory Committee on System Reliability and Reserve Capacity

This Committee, set up to advise Hydro on the conduct of studies regarding system reliability and reserve capacity, has membership from many Ministries (including Environment), consumer groups, the public, Hydro, industry, and public utility commissions.

d) Atomic Energy Control Board

The Ministry has membership on three committees, which advise this Federal Board in connection with electrical power production from nuclear energy:

1. Reactor Safety Advisory Committee
2. Radioactive Waste Safety Advisory Committee,
3. Heavy Water Plant Safety Advisory Committee, (specific to the Bruce Heavy Water Plant).

e) National Uranium Mining Safety Committee

This Committee, which reports to the Atomic Energy Control Board (Federal), controls the licensing of uranium mining operations. Ontario representation is by Ministry of Environment staff.

f) Federal-Provincial Industrial Task Force on Thermal Power

The Task Force has Federal-Industrial-Provincial membership. There are four sub-committees to the main Task Force, which reports to the Federal Department of the Environment. The Ministry also has representation on these sub-committes.

g) Interministerial Committee:

Re Submission by Niagara Basic Power Users Committee, 1974

Ministry of the Environment is included in the membership of this Provincial Committee to investigate Government policy towards claimed preferential rates for the N.B.P.U.C.

h) Export of Electricity to U.S.A.

The Ministry of the Environment liaised with the Ministry of Energy in intervening at the National Energy Board Hearings, 1976, in connection with Hydro's application for an Export License.

i) Ontario Energy Board

The Ministry carried out informal discussions with the O.E.B. and staff members regarding Ontario Hydro's expansion program 1974 to 1984, which was the subject of the Board's Hearings in 1974.

j) Occupational and Environmental Health Advisory Council

The Ministry also has membership on the Special Studies Sub-Committee on the Effect of Radiation from Transmission Lines.

k) International Joint Commission

Under the Canada-United States Agreement on Great Lakes Water Quality, the International Joint Commission reports to both Federal Governments. The Ministry of the Environment has representation on the Great Lakes Water Quality Board (Canadian Section), the Great Lakes Research Advisory Board, and on many of the Committees which report to these Boards. Among those which report to the Water Quality Board, and on which there is Ministry representation, are the Implementation Committee, of which five sub-committees contain Ministry representation; the International Reference Group on Upper Lakes Pollution, with Co-ordinating Committee and Working Groups; the International Reference Group on Great Lakes Pollution from Land Use Activities, with several Task Groups.

The Ministry also has membership in some of the Standing Committees of the Great Lakes Research Advisory Board.

The connection of this with Ontario Hydro's activities lies in the large-scale thermal emissions to the Great Lakes made by electrical generating stations.

The Ministry has membership on the International Michigan-Ontario Air Pollution Board (Canadian Section), under the International Joint Commission.

l) Canada-Ontario Rideau-Trent Study

Ministry has membership on the C.O.R.T.S. Water Quality Group. There about 14 hydro-electric generating stations on the Rideau-Trent River system.

m) Ministry of the Environment Power Co-ordinating Committee

This Committee, internal to the Ministry of the Environment, develops and presents Ministry views to Ontario Hydro, and liaises with Hydro and with other Ministries.

n) Nanticoke Environmental Committee

Membership is drawn from the Ministry of the Environment, the Ministry of Natural Resources, Ontario Hydro, Stelco and Texaco. It directs the planning and implementation of studies into potential and actual effects on the water resource of developments in the Nanticoke area.

o) Toronto District Heating Task Force

The chairman is the Ministry of the Environment representative. This Task Force has been set up to develop policy on proposals to utilize Hearn and Lakeview generating stations for district heating.

A P P E N D I C E S

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3. The Ontario Water Resources Act

4. The Pesticides Act, 1973, with Regulation 618/74.

5. The Environmental Assessment Act, 1975.

6. Flow chart illustrating The Environmental Assessment Act, 1975.

7. Proposed Guidelines for Thermal Generating Stations. (Air Quality)

8. Guideline for the Design of Sources which Emit Sulphur Dioxide in the Sarnia Area. (Air Quality)

9. Guidelines and Criteria for Water Quality Management in Ontario.

10. Criteria and Guidelines - 1971. (Water Quality)

11. Criteria and Guidelines for Water Heat Discharge to the Great Lakes System - 1975.

12. Site Selection Study Guidelines for Thermal and Related Impacts of Proposed Electrical Generating Stations - Water Resources Aspects - Great Lakes.

13. Effluent Guidelines for Water Heat Discharge to the Great Lakes System, 1975.

14. Environmental Design Considerations for Ontario Mining Operations, 1976.

15. (Draft) Environmental Assessment Guidelines for a Potential Generation Station in the North Channel Area.

16. (Draft) Environmental Assessment Guidelines - Electric Transmission Line Studies

APPENDIX 1

ENVIRONMENT ONTARIO IN THE COMMUNITY

Environment Ontario in the Community

Ministry
of the
Environment

AMENDMENTS TO "ENVIRONMENT ONTARIO IN THE COMMUNITY"

A. The Minister of the Environment is now The Honourable George A. Kerr, Q.C.

B. As a result of a partial restructuring of the Ministry of the Environment, which became effective April 1, 1976, the following changes should be noted. Reference should also be made to the revised organization chart (attached).

The Utility and Laboratory Services Division was eliminated, and its Branches transferred to other Divisions:

1) Laboratory Services Branch was transferred to Regional Operations Division.

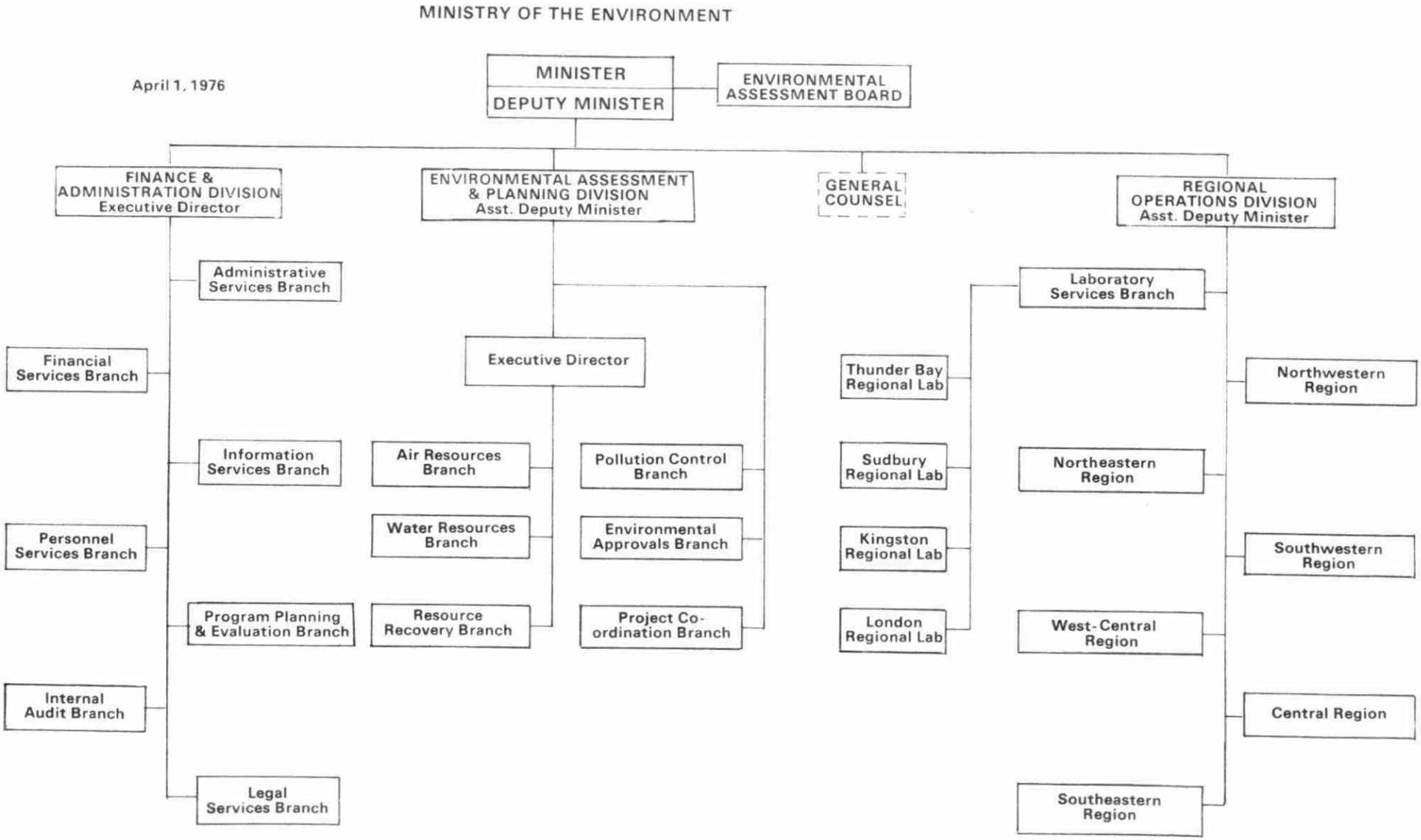
2) Project Co-ordination Branch was transferred to Environmental Assessment and Planning Division.

3) Resources Recovery Branch was transferred to Environmental Assessment and Planning Division.

4) Technical Services Branch was eliminated, and its Sections distributed as follows:

Section	Transferred to:
- Groundwater Development	Project Co-ordination Branch
- Instrumentation	Air Resources Branch
- Marine	Water Resources Branch
- Field Services	Environmental Approvals Branch
- Design and Equipment	Emvironmental Approvals Branch
- Training & Certification	Personnel Branch
- Cartography & Drafting	Administrative Services Branch

REVISED ORGANIZATION CHART



Attach to "Environment Ontario in the Community".

The Ministry

Policies and Management

In the Ontario Government, the Minister of the Environment is an elected Member of the Legislature, appointed by the Lieutenant Governor-in-Council and responsible to the Legislature for the Ministry.

He presents new legislation and amendments to existing legislation within the scope of the Ministry of the Environment to the Legislature for approval and enactment. He is also responsible to the Legislature for the policies, programs, priorities and activities of the Ministry.

The Deputy Minister is the senior civil servant in the Ministry, appointed by the Lieutenant Governor-in-Council as the senior advisor to the Minister and responsible to the Minister for the administration of the Ministry and the implementation of policy.

His senior management staff consists of Assistant Deputy Ministers in charge of Environmental Assessment and Planning, Regional Operations and Utility and Laboratory Services and an Executive Director of Finance and Administration.

Special advisors report to the Deputy Minister on the drafting, review and revision of legislation and on the implementation of the Ontario Government's policy of equal opportunity for women Crown employees.

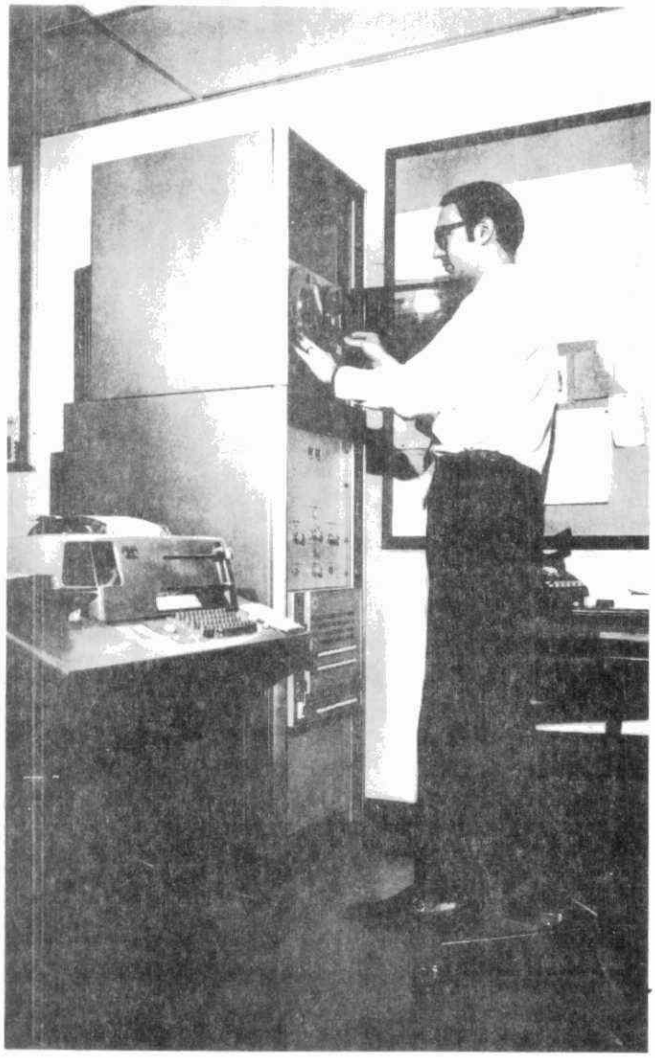
The Environmental Hearing Board, the Environmental Appeal Board, the Pesticides Appeal Board, the Pesticides Advisory Committee, the Farm Pollution Advisory Committee and the Waste Management Advisory Board hear appeals, provide advice or make recommendations to the Minister and his senior administrators in their special fields of interest.

Environmental Assessment and Planning Division

To permit the development of integrated environmental policy alternatives on a Province-wide basis, a high level of expertise is concentrated in one division, Environmental Assessment and Planning.

This Division is entirely separated from policy implementation. It is responsible for the operational performance audit of the Ministry's programs, the investigation into the capacity of the environment for assimilating various types and quantities of contaminants and investigation into new means of treating pollutants before they are discharged into the natural environment.

Four Branches contribute to the responsibilities of the Division: Air Resources, Water Resources, Pollution Control and Environmental Approvals.



Air Monitoring System Computing Centre

Air Resources Branch

The Air Resources Branch provides many of the assessment services to achieve the control of man's impact on the air environment by (a) forestalling undesirable effects, (b) monitoring contaminant levels, and (c) research and development efforts to ensure acceptable air quality throughout the province. The enforcement and surveillance activities are carried out by Regional Operations. The office of the Director manages all the activities of the Air Resources group and provides service, as requested, to other Branches of the Ministry such as Regional Operations, Environmental Approvals and Pollution Control.

The Air Quality and Meteorology Section provides information regarding the quality of the air across Ontario. This information is obtained by direct measurements from nearly 1000 operating sensors and by computer simulation models based on emission data and meteorological information. Whenever concentrations of contaminants exceed levels which may have a detrimental effect on health, a telemetering system provides immediate information so that alerts may be issued and orders given for the curtailment of emissions.

Studies are carried out and consultation is provided on meteorological aspects of air pollution including the physical and chemical process affecting the transport, diffusion, and fate of pollutants present in the atmosphere. Information is provided for the establishment of Ontario's design standards and criteria for desirable ambient air.

The Vehicle Emission Section is involved in the control of the emission of pollutants from motor vehicles. Excessive smoke emissions from commercial vehicles are being controlled through the co-operative efforts of the Ministry of the Environment and the Ontario Provincial Police, under legislation provided in The Highway Traffic Act. Although the Federal Government became responsible for the control of automotive emissions in 1971 and introduced legislation which was identical to that in force in Ontario at that time, the Federal legislation only controlled the manufacturers. Control of on-road emissions is still a Provincial responsibility, so that this Section will continually work towards the updating of Provincial legislation as more effective and practical controls become available. The Ministry of the Environment, in a series of automotive pollution control lectures and demonstrations, is also assisting in the training of automotive mechanics at colleges throughout the Province.

The objective of the Phytotoxicology Section is to provide a comprehensive knowledge of the effects of air pollution on vegetation of all types throughout the Province. Its activity involves the identifying of contaminants, and establishing the degree and extent of air pollution injury to vegetation in the vicinity of existing sources. The Section is also concerned with the provision of pre-pollution baseline data in the vicinity of proposed sources, response to complaints and assessment of reported plant damage; the recommendation of air quality criteria and standards as related to vegetation effects; and the evaluation of sensitivity and resistance of various plant species to air contaminants and of the measures to protect vegetation from air contaminants.

The Technology Development and Appraisal Section conducts special projects such as the mechanism of formation of photochemical smog in Toronto, determination of the environmental limits of SO_2/SO_3 and metallics, absorption of pollutants on ambient particulate matter, etc.

It is also involved in development of instrumentation for ambient air monitoring and source testing with a special emphasis on remote sensing, and maintains a high standard for all stack testing conducted in Ontario. Revisions of the Source Testing Code include the latest developments in this field.

The Section monitors the air quality in specific areas and/or surrounding specific plants. It also identifies latent and potential future problems of air pollution in Ontario and conducts investigations into effects, sampling and analytical techniques, sources, etc. of unique and hazardous materials. It further assesses new technology and developments in major Ontario industries and new processes and equipment for air pollution control.

The Criteria Development and Program Planning Section recommends revisions to existing legislation; ensures that the published ambient air quality objectives for known contaminants are consistent with the current knowledge of physiological, vegetative and other adverse effects of air pollution; issues design standards for the assessment of air contaminant emissions from specific industries, processes and equipment; where necessary, recommends industry-wide regulations for control of contaminant emissions.

The Section also assesses the effects, on ambient air quality, of increased or additional sources of a common contaminant in specific areas of high source concentration.

Environmental Approvals Branch

The Environmental Approvals Branch reviews and approves all applications required by the Ministry under the Environmental Protection Act and the Ontario Water Resources Act. This permits an individual or an organization to seek and receive approval from one branch of the Ministry rather than from several branches.

Also within this Branch, environmental impact assessment activity is closely aligned with formal technical approvals. Environmental assessments have been carried out on activities of Ontario Hydro and the Ministry of Transportation and Communications, submissions from the private sector prepared on a voluntary basis and projects undertaken directly by the Ministry.

There are four distinct sections within this Branch.

The Municipal and Private Approvals Section reviews and makes recommendations regarding the acceptability of all proposed water and wastewater treatment systems and all waste management facilities, either municipal or private, in the Province. The Section also reviews and makes recommendations concerning the issuing of licences and permits required for waste management systems. In addition, the Section develops design criteria and guidelines for use in the development of water, wastewater treatment and waste management systems to ensure that consistent and acceptable design standards are implemented.

The Environmental Assessment Section evaluates at the conceptual planning stage any activity by the ministries of the government, utilities, projects funded by the government and related activities in the

private sector, which will have a significant environmental impact. An opportunity is provided for members of the public to scrutinize environmental assessment documentation and to make representations directly to the government or, where necessary, at formal hearings.

The Land-Use Co-ordination and Special Studies Section acts in an advisory capacity to the Regional Offices, other Branches, other ministries, municipalities and the private sector to ensure that necessary environmental safeguards are incorporated into land-use policies and programs. The section is concerned with matters relating to the environment and land-use, such as subdivisions, official plans, planning and development proposals of regional significance, new town proposals, conceptual plans for water and sewer services, solid waste disposal facilities and river basin planning studies.

The Section is also developing an environmental management policy by undertaking special studies and analysing the cost benefits of specific projects and proposed policies. These studies explore such things as the ability of industry to finance and implement pollution control programs, the construction of a pilot environmental/economic model that will analyse policies and programs and demonstrate their effectiveness or otherwise and the cost benefits of alternative approaches in river basin planning.

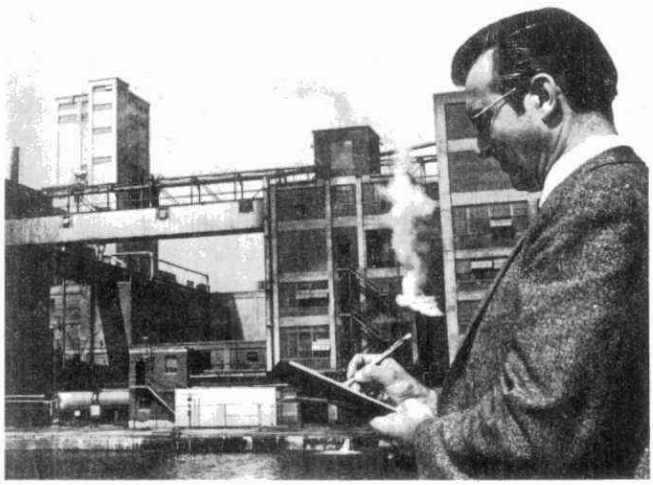
The Industrial Approvals Section assesses the technical adequacy of all applications from industry required by the Environmental Protection Act and the Ontario Water Resources Act. The Section is concerned with the construction of facilities, involving equipment and treatment systems to achieve the Province's desired objectives and requirements for air and water quality control.

Processing of applications involves meeting with industry representatives to state Ministry requirements and to discuss treatment programs with other Ministry staff, recommending public hearings on applications where required by the legislation and on certain optional situations where large new plants could have an impact on the environment and where there could be local public concern. Further steps in the process involve recommending approval with or without conditions, rejecting and/or negotiating revi-

sions to applications considered by staff not to be acceptable and to prepare the appropriate Certificates of Approval according to the legislation.
The section also processes applications from industry under the Pollution Abatement Incentive Act. This Act provides grants, equivalent to the retail sales tax, for pollution control equipment.

Water Resources Branch

The broad role of the Branch is to develop over-all water-quality and water-quantity policies, guidelines and criteria to ensure adequate supplies of good-quality water for the needs of the people of the Province. The Branch's programs are carried out by five sections.



The Planning and Co-ordination Section plans and co-ordinates detailed water resources surveys, major river basin water management studies and reviews environmental impact statements. It plans, co-ordinates and implements Great Lakes Survey programs to examine water quality conditions to determine abatement and remedial measures required to achieve desirable water quality in the Great Lakes. Co-ordination and development of water resources policy, guidelines and criteria, and ensuring their application, are also responsibilities of this section.
The Hydrology and Monitoring Section contributes to the Branch function of developing policies and guidelines relating to ground-water protection and water resource assessment. It co-ordinates and directs inventory programs for water quality and quantity related to inland waters. The provision of geotechnical support for Ministry hydrogeological and ground-water development programs is a responsibility of this Section. The Section also administers a program for the licensing of water-well contractors across the Province. It participates in the development and application of uniform policies for the water taking permit program. Guidelines are developed for environmental impact statements relating to ground-water protection.
The Limnology and Toxicity Section performs a wide range of routine and special studies into the relationships between aquatic organisms and the chemical and physical characteristics of the water environment.
The Limnology Unit monitors water quality to determine the ability of lakes and streams to support fish and plant life, assesses the effectiveness of the phosphorus removal program and develops lake restoration techniques such as weed harvesting, destratification and the neutralization of acidified waters. The Toxicity Unit provides data on the harmful or lethal effects of industrial wastes, pesticides and other contaminants on aquatic organisms and contributes to the development of water quality guidelines and standards.
The Water Modelling Section develops, adapts and applies mathematical models and analytical methods to represent and predict the response of lakes, streams and ground water to withdrawals, waste inputs, pollution control measures, land-use practices and climatic conditions, in order to aid water-management policy development, planning and decisions and environmental impact assessment. The Section determines hydrologic, hydrogeologic and hydrochemical relations in representative areas to develop and test models.
The Data Systems and Administration Section designs, develops and implements systems that store, retrieve and process data that are related to the programs of the Branch.
The Branch provides a support function to the various Regions through technical advice, guidance, assistance and training. Support is provided by the various sections and includes such activities as: providing expertise in undertaking drainage basin studies, hydrologic studies and in assessing complex ground-water and surface-water interference and quality problems; determining lake current patterns and quality characteristics and suitable locations for water intakes and effluent outfalls; applying routine models and computer programs to predict the effect of changing waste loadings on streams and lakes; providing specialized biological expertise and laboratory support, including phytoplankton and zooplankton identification and enumeration and bioassays of pesticides, speciality chemicals, industrial wastes and other contaminants; developing study plans and providing advice on public participation in the development of water-management plans.

Pollution Control Branch

The Branch is responsible for the planning and development of policies and programs for the prevention, control and abatement of discharges or emissions of contaminants to the environment and for the assessment of the effectiveness of the programs. To meet these responsibilities, the Branch

operates through nine Sections which may be subdivided into three groups: Policy and Program Development and Audit, Contingency Planning, and Technology Development and Research.

The four Sections in the Policy and Program Development and Audit Group are: Municipal and Private, Industrial, Noise Pollution Control and Pesticides Control. Each has basic functions in assigned areas which include; the development of policies and programs for adoption by the Ministry, the development of standards, objectives and guidelines for emissions and sources of emissions, the development of appropriate legislation and regulations, and the appraisal of new treatment units and processes.

Other functions include the development and operation of central data, records and information systems for management purposes to serve all Branches and Regions, advising and consulting with delivery units on policies, programs, and standards, and providing expert technical advice to Regions, consultants and clients. These Sections also support diverse activities such as training, environmental assessment, prosecutions and International Joint Commission studies.

In addition, these Sections maintain external liaison with agencies, associations, and other groups with associated interests and responsibilities, identify and plan for potential program areas and administer the nutrient treatment portion of the Canada-Ontario agreement.

The Municipal and Private Section contains four units, namely; municipal water, municipal sewage, private sewage, and solid wastes. In addition to the coverage implied by the titles, the municipal sewage unit co-ordinates the nutrient removal program; the private sewage unit deals with such diverse matters as boating, shipping, marinas, ice huts, and holding tank systems; and the solid wastes unit will be working with resource recovery research and evaluating new and innovative systems for the collection, recovery, utilization and disposal of wastes or its components.

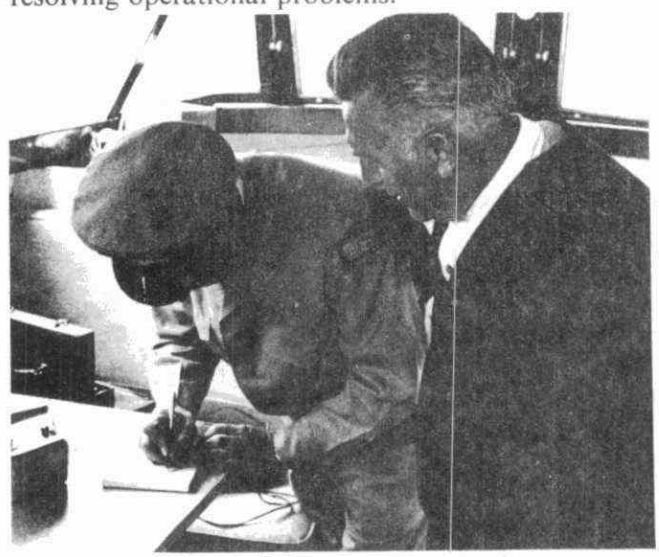
The Industrial Section deals with liquid, gaseous and solid emissions to the environment from industrial and institutional sources.

Within the Branch, regulations covering vehicle noise and stationary noise sources are being developed and tested. At this stage, the program also involves assessment and monitoring of noise, data collection, technical development and consultation with municipalities with respect to both municipal bylaws and municipal planning in relation to noise.

The Pesticides Control Section, in addition to providing for policy and program development will continue to issue many of the licences, permits and approvals associated with the program. Close liaison is maintained with the Pesticides Advisory Board which has the functions associated with the classification of products, and review of publications and legislation.

The Contingency Planning Section is responsible for development of the framework for meeting emergency situations and maintains close liaison with industrial, municipal and federal associates. In addition to assisting in the development of regional capacities, it responds to major field emergencies.

The Technology Development and Research Group operates primarily in the field of water, but is geared to wider service. Each of the four Sections draws its assignments from requests and referred problems, and provides expert advice and assistance in avoiding or resolving operational problems.

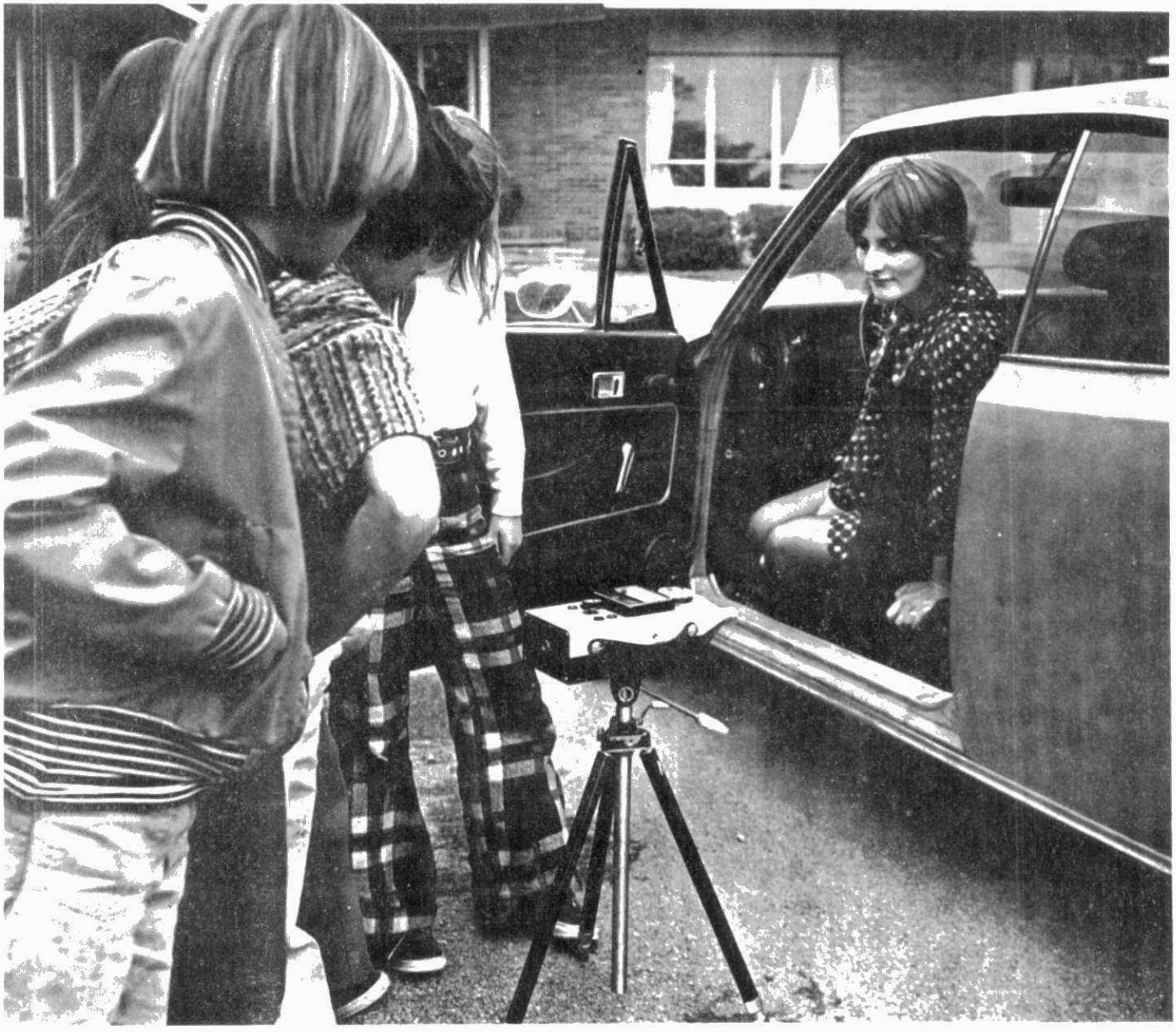


The Co-ordination and Technology Transfer Section is responsible for overall research co-ordination; for dissemination of new technology, for control of external research grants, or studies for miscellaneous research projects and for the research facilities.

The Wastewater Treatment Section conducts developmental research into municipal and industrial wastewater treatment processes and develops and evaluates wastewater treatment techniques and equip-

ment. Considerable attention is given to nutrient removal and sludge handling and disposal.
The Water Treatment Technology Section develops, refines and evaluates processes and equipment associated with water supply, treatment and distribution. The work may involve full plant or laboratory scale studies.

The Applied Science Section provides a strong expertise in the field of soils and the movement and renovation of contaminants in the soil. It deals with private sewage disposal systems and with unusual or innovative concepts and processes that are broad in sense and application.



Regional Operations Division

Regional Operations Division is responsible for policy implementation and the delivery of Ministry services to the public.
This includes environmental protection activities such as abatement programs and complaint investigations, regional environmental assessment activities and the operation of sewage, water and waste projects.
Environment Ontario has divided service to the Province into six regions: Northwestern, with an office in Thunder Bay; Northeastern, with an office in Sudbury; Southwestern, with an office in London; West Central, with an office in Hamilton; Central, with an office in Metropolitan Toronto; and Southeastern, with an office in Kingston.
These regional headquarters are supplemented by district offices across the Province.
Both the district and regional offices play a key role in making the Ministry conveniently accessible to municipalities, the public and the organizations which are involved in or affected by its services.
A considerable amount of authority and responsibility is delegated to the Regional Director in the regional office. This office also provides a strong base of administrative rapport and technical expertise to back up the delivery of services within the region.
The program in the Region is carried out by four sections: Industrial Abatement; Municipal and Private Abatement; Technical Support (Environmental monitoring and planning); and Utilities Operation.

Industrial Abatement

The Industrial Abatement Section is responsible for the protection of the natural environment from emissions from industrial processes; from commercial, institutional and agricultural operations; from construction and demolition activities; and from certain activities of individual citizens.
This Section makes preliminary investigations into a wide range of environmental complaints, initiates abatement action and ensures that problems outside its jurisdiction are referred to the proper authority. It also provides information to industry and to the public on the current technology for controlling existing sources of pollution, for process changes when expansion is anticipated and for the disposal of hazardous wastes.
Industrial Abatement Staff conducts investigations into compliants of air, water and land contamination from the above sources, identifies possible infractions of The Environmental Protection Act, 1971 and its Regulations and The Ontario Water Resources Act and establishes appropriate abatement programs. Similarly, abatement programs may result from the routine industrial surveys made by the engineering staff of the Section. Such programs are normally negotiated on a co-operative basis or at times through court action. Where court action is necessary, the careful gathering of evidence may require many weeks of painstaking work involving direct observations by specially trained field personnel, the use of sophisticated monitoring devices or of soil, water or air sampling followed by physical and chemical analysis. In this regard, the Industrial Abatement Section makes extensive use of the support capability provided by the Laboratory Services and Technical Support Sections of the Ministry.
Responsibilities under the Air Pollution Index and Alert Systems include surveillance and taking appropriate action for Metropolitan Toronto, Hamilton, Sudbury, Welland and Windsor. Other activities of the section include the gathering of source data for the Metropolitan Toronto emission inventory and mathematical model, on a continuing basis.

The Industrial Abatement Section provides on a regional basis, a 24-hour first-line engineering assessment and co-ordinating function under the Ontario Contingency Plan for transportation and other emergency spills.
In addition to contact with complainants and persons responsible for emissions into the environment, fulfillment of the above responsibilities requires liaison with related authorities at the municipal, provincial and federal levels, including local fire, police, health, by-law enforcement and works departments, the Provincial Health and Labour Ministries and the Federal Ministry of Transportation.

Municipal and Private Abatement

The Municipal & Private Abatement Section is responsible for the field program designed to enhance and protect the environment in matters relating to activities of municipalities and citizens.
Activities of the Section include surveys of liquid discharges to water for the purpose of detecting pollution emissions; surveys of land areas to locate litter and derelict vehicles; inspections of communal water and sewage works, waste disposal sites, marinas, boats, ice shelters, pesticide application, storage and sales, water wells, derelict vehicle sites, septic tank systems, sewage holding tanks and disposal sites for liquid waste from septic tanks, holding tanks and sewage treatment plants to ensure compliance with the Environmental Protection and the Ontario Water Resources Acts and their regulations; and, investigation of complaints regarding the protection of the environment.
Following the findings of pollution surveys, inspections and complaint reviews, a remedial program is undertaken, which includes issuing orders, reports,

directions, control orders and initiating prosecutions as required.

In addition, the Section monitors inputs to the environment, such as sewage treatment plant effluents; provides technical advice to municipal officials, consultants and citizens on matters relating to the protection of the environment; responds with the contingency plan framework to sewage overflows, breakdown in water supplies; pesticide spills; collects preliminary data to determine cause of fish kills; aids in the approval of waste disposal sites, sewage lagoons, sewage treatment plants and water works by undertaking site inspections; inspects works under construction to ensure they are installed according to approved plans; and, approves septic tank and sewage holding tank systems.

Utility Operations

The main purpose of the Utility Operations Section is to provide water and waste water service to municipalities. When the construction of works financed by the Province is substantially completed, the group assumes responsibility for the staffing, equipping, and continuing administration of the project. This work is accomplished through a regional staff of professional engineers, technologists, technicians, maintenance co-ordinators, plant superintendents and plant maintenance, laboratory operating, clerical and labour staff.

Utility Operations staff is familiar with plant and systems engineering and maintain a close liaison with consulting engineers, equipment suppliers and Ministry personnel in associated disciplines. By these associations and the review of contract documents, pre-selection of equipment, maintenance of engineering records and the assistance provided to other Ministry bodies in preparing suitable terms of reference, some uniformity and reliability of service is provided to participating municipalities. The group provides information for budgeting and multi-year forecasts of all projects.

Standards of operation, sampling, maintenance, reporting and appearance are established.

Quality control is provided by close supervision of plants and installation, both for Ministry and municipally operated facilities.

Close co-operation with participating muncipalities is obtained through the formation of local advisory committees.

Technical Support

The Technical Support Section is involved with monitoring and evaluating changes in the environment; co-ordinating regional environmental impact assessment statements; and evaluating the effectiveness of the Ministry's abatement programs.

Four sub-sections make up the working units: Planning and Approvals; Air Quality Assessment; Water Resources Assessment and Laboratory.

The Planning and Approvals staff review official and subdivision plans, solicit comments from the abatement and assessment groups and co-ordinate comments about the Ministry's concerns for the possible effects of such plans on the environment.

The withdrawal of water from streams, lakes, ponds and wells is regulated by a permit program to ensure that withdrawals do not result in environmental degradation or in hardship to neighbouring water users. Certificates of Approval are issued to regulate a wide variety of activities which are likely to affect the environment.

The responsibility for these approvals is shared between the Regional Staff and Head Office staff in Environmental Approvals Branch. The Regional Planning and Approvals staff deals with more straightforward non-complex approvals and Head Office deals with more complex approvals including multiple-source installations.

Certificates are issued for the installation and operation of equipment emitting or discharging contaminants (gaseous, liquid or solid); for sewage treatment plants and systems; water treatment plants and systems; waste disposal sites; derelict motor vehicle sites and for other activities which affect the quality of the environment.

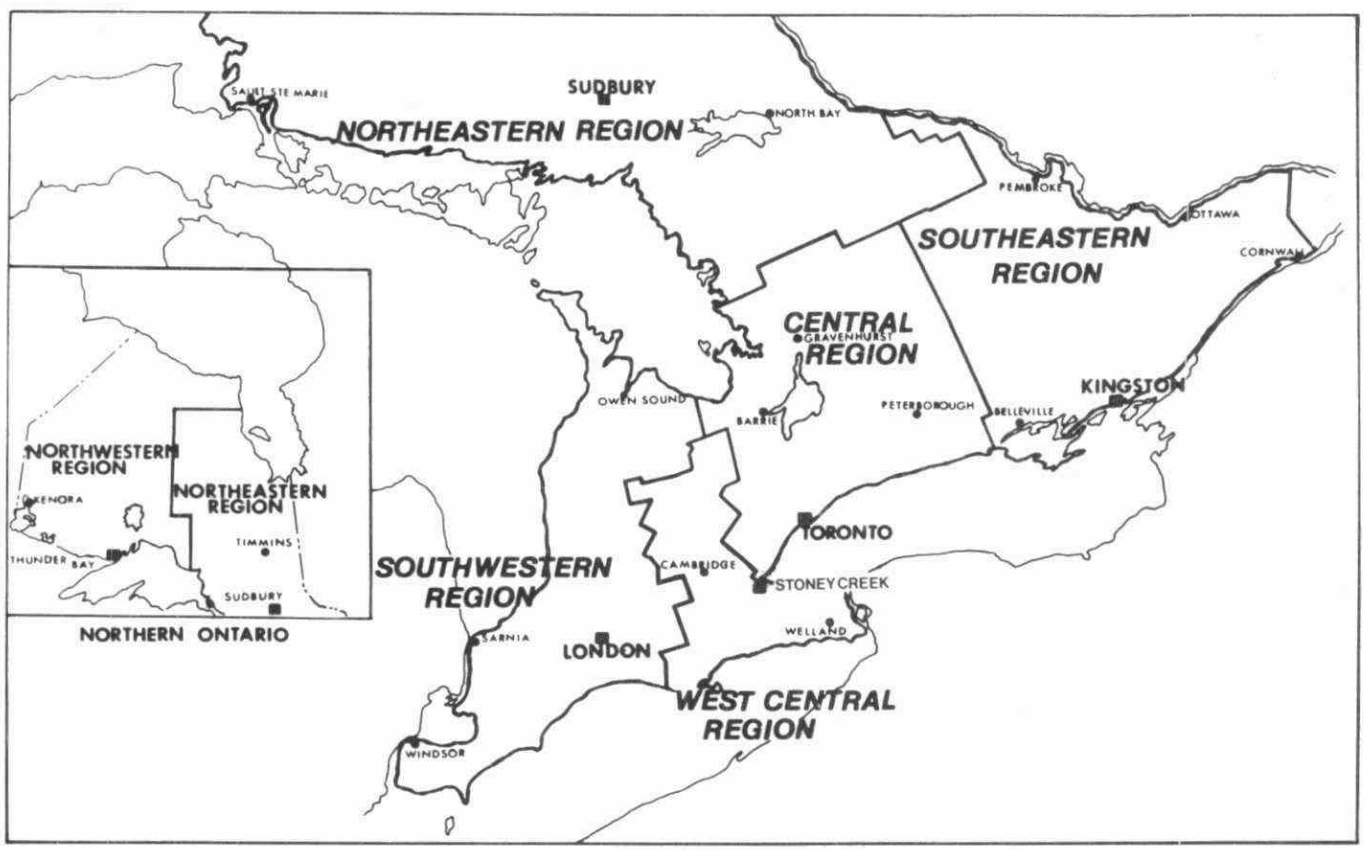
The Air Quality Assessment sub-section is responsible for monitoring and assessing the quality of the ambient air in the region. It provides the "feed-back" loop for the air programs of the Industrial Abatement Section.

The group establishes and operates an extensive network of sensors to obtain data on air pollutant concentrations and meteorological conditions. Special surveys are conducted to identify specific sources, determine whether they are in compliance with standards and criteria, and to provide air quality data for the preparation of impact assessment statements. New instrumentation and techniques to improve accuracy and sensitivity are continuously being developed and evaluated. The network is expanded to include new pollutants.

Data collected are analysed and interpreted to define air pollution areas, to assess the effect of industries on air quality, to establish planning and zoning regulations, to assess the effectiveness of abatement programs, to determine air quality trends, and to help assess effects of air pollution on health and damage to vegetation and materials. The Air Pollution Index is used to restrict the emission of pollutants whenever the value exceeds set criteria. The group assists in the development and assessment of future abatement strategy.

The Water Resources Assessment Group is responsible for: monitoring the quality and quantity of water within the region; responding to complaints on water interference or water quality; preparing impact assessment statements and undertaking resource assessment surveys of drainage basins and lakes.
A network of surface water and groundwater stations for determining the quantity and quality of water is maintained and is expanded to meet development needs. A service to advise citizens wishing to drill wells is also provided.
Physical, chemical and biological sampling and analyses are conducted; impact of development on the quality and quantity of water are assessed; recommendations are made on what is required to minimize or correct degradation of the environment; methods are developed and utilized to determine the amount and variability of streamflow and groundwater storage.

The Laboratory staff conduct water, air, soil and vegetation analyses that are used to assess the quality of the environment. The following analytical services are provided; micro-biological analyses of samples from the aquatic environment; chemical analyses for standard quality parameters from the aquatic environment; chemical analyses on environmental samples for trace inorganic and organic constituents; chemical and physical analyses on air constituents and vegetation samples.
The Laboratory sub-section carries out a surveillance program on Provincial water supply systems; determines the type and level of pollution from waste discharges; specifies remedial action to meet objectives.
In the case of the Central and West Central Regions, laboratory service is provided by the Head Office Laboratory.



Utility and Laboratory Services Division

The Utility and Laboratory Services Division provides technical support, supervision and financial management to physical plants under construction with provincial funds to meet pre-determined quality standards. It also provides specialized technical services to various branches of Ministry operations.

The Division plays a key role in the development of housing and commerce in Ontario by providing the basic services of water supply and sewage treatment, in providing the analytical services and scientific expertise essential to pollution control and environmental protection, and in the recovery of waste materials.

Residents of Ontario currently generate over eight million tons of waste a year, most of which goes into landfill sites. Over a 15-year period starting in 1975, the Ministry intends to channel 90 per cent of this into resource recovery plants to recover materials for recycling and to thereby reduce the amount of land currently required for municipal waste sites.

Water and sewage treatment works are not only the essential means of providing potable water and proper treatment of municipal effluent for the communities they serve, they are also a major facility for pollution control and abatement.

Laboratory Services Branch

This Branch participates in the planning, implementation and the data interpretation related to a number of testing and sampling activities.

Chemical and biological analysis undertaken in the Ministry's central and regional laboratories helps to establish not only the existence, nature and degree of environmental degradation, but also the proper corrective measures and provides a valuable assessment of the effectiveness of these measures.

Branch staff also provide, when necessary, expert testimony for legal action undertaken by the Ministry.

In addition to providing economical, high quality, analytical services and scientific expertise, the Laboratory Branch continually refines existing analytical methods and develops new procedures and expertise for measuring and assessing new environmental pollutants.

There are five Sections in the Central Laboratory.

Air Quality Laboratory provides chemical and physical analysis on air constituents and vegetation samples.

Two Environmental Trace Contaminants Sections provide chemical analysis on environmental samples for trace inorganic and organic constituents.

Analysis of trace metals, anions and sediment identification form the bulk of the work of the Inorganic Trace Contaminants Section.

The Organic Trace Contaminants Section deals with isolation and identification of micro-organic pollutants.

Microbiology Section provides microbiological analysis on samples from the aquatic environment.

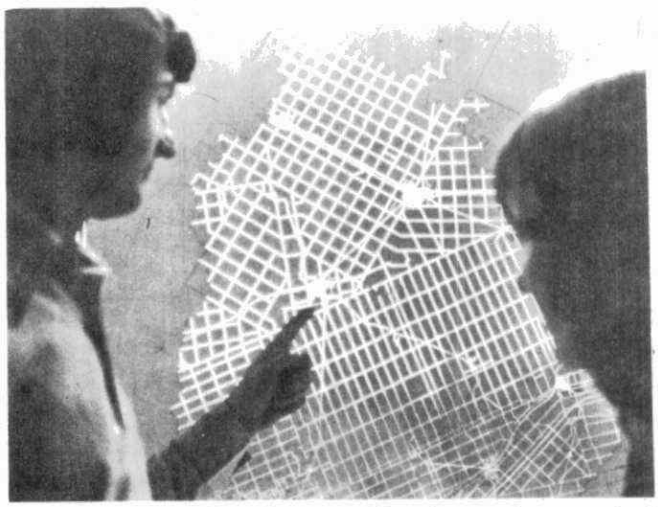
Water Quality Section provides chemical analysis for standard quality parameters on samples from the aquatic environment.

Project Co-ordination Branch

This Branch participates in the development of water and sewage treatment works, servicing policies and programs, and waste reclamation and other projects for the Ministry or other government agencies. It co-ordinates information from various government agencies related to the Ministry's provincially funded capital sewage and water projects, and supervises and co-ordinates the design and construction of these projects.

The Branch administers the application of provincial subsidies to both municipal and provincial capital projects and participates in the allocation of federal Central Mortgage and Housing Corporation loans for eligible capital projects.

The organization of the Branch brings a project management concept to the development and construction of the Ministry's works. Six project managers, each assigned to one of the Ministry's regions,



are responsible for the co-ordination and control of projects within their regions from the conception to the completion of construction, when the projects are turned over to the Regional Operations Division for operation. This system is designed to improve communication and liaison among Ministry staff, the municipalities and the consulting engineers participating in Ministry projects.

Other sections of the Branch deal with claims arising from construction, ground water development, property, special project development such as area programs, and municipal projects.

Technical Services Branch

This Branch offers a wide range of technical and operational services and carries the responsibility for the assessment and acceptance or rejection of the consultant's engineering designs for projects included in the Ministry's capital works program. This program increased to $120 million for the year 1974/75 and continued escalation is visualized for several more years as the number, size and complexity of treatment projects continues to grow. In addition to design review, technical services are available to other Branches of the Ministry.

The increase in the capital works program has resulted in a greater degree of accountability in the manage-

ment of funds. This, together with receiving and opening of tenders, contract awards and contract payments, is the responsibility of the Budget Control Section.

A team of engineers and technicans skilled in the maintenance and operation of electrical, diesel and heavy machinery, and related instrumentation, provides assistance to plant operators. In turn, the information secured from maintenance and operation of equipment is transmitted to the design review team to be reflected in new design and equipment preselection. These same technicians are responsible for the inspection of projects under construction to ensure compliance with contracts and to make sure that instrumentation and equipment are installed correctly for efficient operation and long life.

Reorganization has recreated a big demand for technical training and retraining of Ministry staff. Training, Certification and Safety Section has the role of developing curriculums and arranging courses and seminars using technical staff from other Branches of the Ministry or from outside, as required. Safety training and safety inspections of Ministry operations are provided by an experienced staff.

A wide range of mapping, drafting, artistic design and reproduction services is provided by the Cartography and Drafting Section with a small staff of well trained and experienced personnel.

The Marine Services unit operates the fleet of five vessels on the Great Lakes which meet the sampling requirements of the Water Resources Branch. Maintenance and service are provided for this fleet and for some of the smaller runabouts used in the water sampling programs. A staff of qualified marine Captains is carried to navigate the larger vessels.

The Instrumentation Section provides calibration services to the air quality monitoring network. It also evaluates new instruments and audits field maintenance of instrumentation.

Resource Recovery Branch

This branch is developing and implementing a comprehensive waste management program for the conservation and recovery of resources throughout Ontario.

By 1990 the Ministry will establish a complete resource recovery program to service at least 90 per cent of the province. The Resources Recovery Branch co-ordinates this $500 million program.

Recovering waste materials so they may be recycled for productive use is a relatively new field, and an area in which many technological advances are yet to be made.

To achieve this objective the branch has established an experimental research plant and centre at Downsview, in the metro Toronto area, for the purpose of testing processes and of assisting in development of new procedures for resource recovery and recycling.

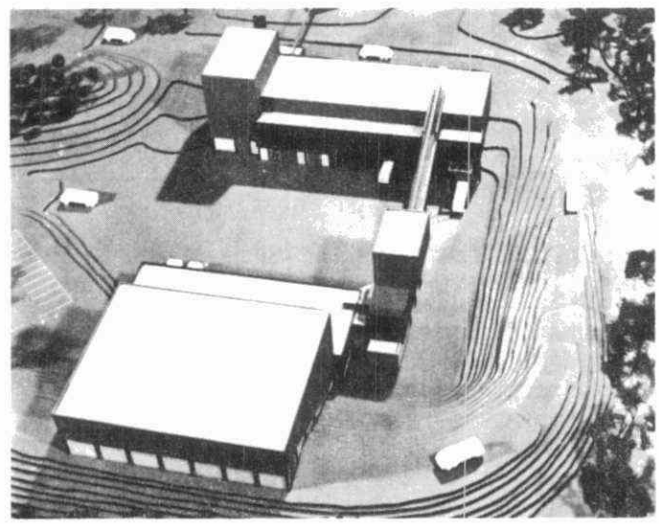
Main function of the branch is to give assistance and guidance to municipalities in the economic development of integrated area waste management systems, which will then be serviced by resource recovery plants, constructed as part of the program by Environment Ontario.

The branch also works closely with the Waste Management Advisory Board in researching and forming provincial policy with regard to measures by which the quantity of waste can be reduced.

The long-term goal of the Ministry is to recover all valuable resources possible from waste, and at the same time to reduce the amount of waste produced. This will reduce the need for the landfill sites for garbage and other waste by as much as 80 per cent.

There are three sections in the Resource Recovery Branch.

The Program Development Section deals with three areas: the co-ordination of the staged implementation of waste management throughout Ontario; the development of an information system model which will optimize the recovery of resources through the management of waste; and the development of a resource recovery program which can meet the demands of rapid changes in technology.



It helps with the development of provincial systems to handle the recovery of waste — the location and design of reclamation plants, and the improvement of local waste systems aimed at reducing the amount of land required as fill sites.

The Technology and Market Development Section provides technical support, advice and consultation to the Ministry, other government agencies, universities, consultants, industries and municipalities in matters related to waste processing and resource recovery. It evaluates the potential of new technology in this field for practical application through the operation of the 200-ton-per-day experimental plant in North York, and co-ordinates the development of markets and uses of recycled resources.

The Project Development Section develops, in co-operation with municipalities, efficient waste management and recovery systems. It handles projects through the initial stages of planning, construction and financing up to the establishment of management operation and training of operators.

Finance and Administration Division

The functions of the Finance and Administration Division fall into three broad areas: Service, Control and Co-ordination. Some of the branches have responsibilities in all three categories.
Services include providing information to the public, legal advice to senior officials, employee counselling, development of systems, payroll preparation, etc.
Some of the control functions exercised by the Division include ensuring that jobs are classified according to standards set down by the Civil Service Commission, the allocation of accommodation in line with standards administered by the Ministry of Government Services, and limiting expenditures to the levels shown in the annual estimates as approved by the Legislature.
The co-ordination activities involve liaison with the central agencies, including the Resources Development Policy Field Committee, Management Board, Civil Service Commission, Ministry of Government Services, etc. This liaison covers such functions as the multi-year plan, procurement of accommodation, staff recruitment, etc.
with regard to consistency, fairness and economy which transcend individual Ministry, operations. Part of the responsibility of the Division is to ensure that the Ministry conducts its functions within the broader framework established by the central agencies.

Financial Services Branch

The Financial Services Branch performs a dual role by providing financial support services to the Ministry and its staff while ensuring that all expenditures and revenue transactions conform with Provincial and Ministry approved controls.
In its support function the branch provides a wide range of services to both staff and management. These range from processing payrolls and expense reimbursement for staff, and the subsequent distribution of cheques, to the maintenance of all Ministry financial records. Other services include providing advice and assistance on the development of new procedures, the interpretation of established financial policies and regulations, and the production of financial reports and information.
The reporting of financial information involves the production of actual expenditure data, comparison to budgets, detailed project cost and public accounts statements as well as analysis, assessment and recommendations concerning the adequacy of service rates charged for provincial sewage and water works. Due to the variety of the Ministry's financial activities, the branch must maintain constant liaison with the municipalities, other Provincial ministries and several federal agencies.
In its control function the Branch is responsible for ensuring that all the Ministry's expenditures and revenue transactions are conducted in accordance with the approved Provincial and Ministry policies and procedures. The total expenditures processed are not to exceed the appropriations approved by the Legislature. The Branch also administers the control of all financial terms contained in project agreements, cost-sharing agreements and Ministry legislation which imposes the responsibility of collecting and recording all sums due to the Ministry.

Legal Services Branch

This Branch provides a wide range of legal services to support the implementation of the policies and programs of the Ministry, including the prosecution in the courts of companies and individuals for violations under The Environmental Protection Act, The Ontario Water Resources Act and The Pesticides Act.
In addition, the Branch provides legal advice to the operating Branches, prepares Orders-in-Council, regulations, contracts and orders.

Program Planning and Evaluation Branch

The Program Planning and Evaluation Branch conducts operational and policy evaluation studies relating to environmental planning, environmental control, resource recovery and administrative support services. This includes the development of output measures for assessing program effectiveness and efficiency.

A major responsibility of the Branch is the development of the multi-year plan, from the initial policy submission to the completion of the annual estimates. The Branch also co-ordinates all liaison activities with program co-ordinators, both within the Ministry and the Resources Development Policy Field and also fulfills the Ministry's requirements to the Policy and Priorities Board, the Policy Field Committee and Management Board.

Information Services Branch

Information Services Branch presents and interprets the Ministry of the Environment's programs and policies to the general public and a number of specific client groups interested in or involved with environmental activities, as well as serving as a resource centre for environmental information. It assesses information needs and initiates appropriate information programs.
The Creative Services Section produces photographic film and other audio-visual material, and graphic design to support information and Ministry programs, as well as acting in an advisory capacity to other Branches. The Section is also responsible for co-ordinating the design and production of Ministry pamphlets, brochures and reports.
The Information Programs Section plays both an active and an advisory role in public contact, media relation, information and education and exhibit programs for the Ministry and its branches on a province-wide or regional basis. In co-operation with Creative Services, the Section prepares and produces the necessary material for these programs. Office Services provides support service and distributes information material to the public.

Administrative Services Branch

This Branch consists of a number of sections which provide various administrative and support activities for the operating programs of the Ministry.

Library Services Section procures, catalogues, maintains and circulates relevant texts, literature and reference material.

Office Services Section assigns accommodation and space to staff, manages and controls records and documents and provides telephone communication and mail services.

Printing Services Section designs, manages and controls forms and manages in-house printing, contract printing and word-processing systems.

Procedures Manual Section edits, up-dates, publishes and circulates Ministry policies and procedures.

Supply Services Section purchases, inventories and disposes of assets, and manages Head Office stockroom and laboratory stores — motor vehicle maintenance and production shops.

Systems and Electronic Data Processing Section designs, implements and maintains Ministry information systems and data banks.

Personnel Services Branch

The Personnel Services Branch performs both advisory and control roles for the Ministry. The prime emphasis is placed on advising management on matters concerning both organizational structure and employees.

A personnel officer is assigned to each operating branch of the Ministry to maintain understanding of operations, philosophy, management and employee concerns of that Branch.

The Staffing Section provides specialist advice on staffing problems and assumes the responsibility for advertising and following up positions in promoting the career concept within the Ministry through effective use of job competitions. The section conducts continuous recruitment for clerical stenographic and entry-level professional and technical positions within head office as well as co-ordinating summer student and government recruitment programs such as SWEEP (Students Working in an Environmental Enhancement Program).

The Organization Development and Manpower Training Section plans, develops, presents and supports a wide variety of courses, seminars and workshops in addition to assisting supervisors and managers in identifying specific organization problems.

The Employee Relations Section is responsible for establishing and maintaining an effective employee relations program through collective bargaining, employee counselling and exit interviewing, retirement services and specialist services pertaining to employee benefits and working conditions.

The Audits and Standards Section maintains a monitor on the Ministry's application of classification and staffing standards to ensure uniformity in the recruitment, classification and processing process.

The Office Services Section is responsible for processing documentation affecting classification and salaries in addition to providing internal clerical support for all professional staff.

The Personnel Services Branch recognizes that the people who make up the Ministry are the single most valuable resource available to its proper functioning, and, as such, are committed to programs that are responsive, effective, and optimize the utilization of its human resources.

Internal Audit

The Internal Audit Branch carries out a comprehensive program of financial and operational internal audits throughout the Ministry with the objective of independently evaluating the effectiveness and efficiency of the systems of internal control designed to protect and safeguard Ministry interests and assets and its revenues and expenditures.

In carrying out its program of internal audits, the Branch performs a vital service to middle and senior Ministry management through the preparation and issue of in-depth audit reports which identify specific problem areas of internal control and sets out proposed audit recommendations for the correction of these control deficiencies.

COMMISSIONS AND COMMITTEES

***The Environmental Hearing Board:**
The Environmental Hearing Board conducts public hearings at the discretion of the Minister, to review and make recommendations on the environmental impact of major development proposals.

Environmental Appeal Board
The Environmental Appeal Board considers appeals against a variety of decisions made by Ministry directors under the Environmental Protection Act and the Ontario Water Resources Act. These appealed decisions include the issuance of control orders, the withholding or renewal of certificates of approval and the imposition of conditions in issuing licences, permits and certificates of approval.

The Pesticides Advisory Committee:
This committee is responsible for the classification and researching of pesticide products for sale in Ontario, related specifically to their environmental impact and safety. It also reviews annually the Pesticides Act and other government publications, to recommend changes or additions to the Minister.

Farm Pollution Advisory Committee:
The Farm Pollution Advisory Committee provides advice to farmers on the proper and normal farming practices in the disposal of animal wastes.

Waste Management Advisory Board:
This Board is a policy analysis group which acts as an advisory body to the Minister on problems and issues in waste management as required, and on recovery of materials and energy resources from waste.

Pesticides Appeal Board:
The Pesticides Appeal Board reviews submissions in appeal to licensing decisions of the Ministry's Pesticides Control Branch.

Special Advisors:
Two special advisors report directly to the deputy minister.

A women's advisor co-ordinates the implementation of the Ontario Government's policy of equal opportunity for Women Crown Employees.

A general counsel is responsible for the drafting, review and revision of the legislation which provides the authority for the Ministry's policies and programs.

*Note:
The Environmental Assessment Board, when appointed, will assume the duties of the Environmental Hearing Board and will hold hearings under the Environmental Assessment Act.

APPENDIX 2

THE ENVIRONMENTAL PROTECTION ACT, 1971

& REGULATIONS 15, 17, 872/74

Ontario

The Environmental Protection Act, 1971

Statutes of Ontario, 1971
CHAPTER 86

as amended by

1972, Chapter 1, s. 69; 1972, Chapter 106; 1973, Chapter 94 and 1974, Chapter 20

— and —

Regulation 15

Revised Regulations of Ontario, 1970

as amended by O. Reg. 873/74

Ontario Regulation 872/74

DECEMBER
1974

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CHAPTER 86

The Environmental Protection Act, 1971

1.—(1) In this Act, Interpretation

(*a*) "air" means open air not enclosed in a building, structure, machine, chimney, stack or flue;

(*b*) "Board" means the Environmental Appeal Board;

(*c*) "contaminant" means any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination of any of them resulting directly or indirectly from the activities of man which may,

(i) impair the quality of the natural environment for any use that can be made of it,

(ii) cause injury or damage to property or to plant or animal life,

(iii) cause harm or material discomfort to any person,

(iv) adversely affect the health or impair the safety of any person, or

(v) render any property or plant or animal life unfit for use by man;

(*d*) "Department" means the Ministry of the Environment;

(*da*) "Hearing Board" means the Environmental Hearing Board established under *The Ontario Water Resources Act*; R.S.O. 1970, c. 332

(*e*) "land" means surface land not enclosed in a building, land covered by water and all subsoil, or any combination or part thereof;

(*f*) "local board" means a school board, public utility commission, transportation commission, public library board, board of park management, local board of health, board of commissioners of police, planning

board, or any other board, commission, committee, body or local authority established or exercising any power or authority under any general or special Act with respect to any of the affairs or purposes, including school purposes, of a municipality or of two or more municipalities or parts thereof;

(*g*) "Minister" means the Minister of the Environment;

(*ga*) "Ministry" means the Ministry of the Environment;

(*h*) "municipality" means the corporation of a county, metropolitan area, regional area, district area, city, town, village, township or improvement district and includes a local board thereof and a board, commission or other local authority exercising any power with respect to municipal affairs or purposes, including school purposes in an unorganized township or unsurveyed territory;

(*i*) "natural environment" means the air, land and water, or any combination or part thereof, of the Province of Ontario;

(*j*) "person" includes a municipality, a corporation on behalf of Her Majesty in right of Ontario, and an agent of any of them;

(*k*) "person responsible" means the owner, or the person in occupation or having the charge, management or control of a source of contaminant;

. . . . . .

(*m*) "provincial officer" means a person who is designated by the Minister as a provincial officer for the purposes of this Act and the regulations;

(*n*) "regulations" means the regulations made under this Act;

(*o*) "source of contaminant" means anything that adds to, emits or discharges into the natural environment any contaminant;

(*p*) "water" means surface water and ground water, or either of them. 1971, c. 86, s. 1; 1972, c. 1, ss. 1, 69 (1); 1972, c. 106, s. 1.

Idem, Director (2) In this Act, "the Director" means a Director appointed under section 3*a*. 1974, c. 20, s. 1.

PART I

ADMINISTRATION

Purpose of Act

2. The purpose of this Act is to provide for the protection and conservation of the natural environment. 1971, c. 86, s. 2.

Powers and duties of Minister

3. The Minister, for the purposes of the administration and enforcement of this Act and the regulations, may,

(*a*) investigate problems of pollution, waste management, waste disposal, litter management and litter disposal;

(*b*) conduct research related to contaminants, pollution, waste management, waste disposal, litter management and litter disposal;

(*c*) conduct studies of the quality of the natural environment, meteorological studies, and monitoring programs;

(*d*) conduct studies of environmental planning designed to lead to the wise use of the natural environment by man;

(*e*) convene conferences and conduct seminars and educational and training programs relating to contaminants, pollution, waste and litter;

(*f*) gather, publish and disseminate information relating to contaminants, pollution, waste and litter;

(*g*) make grants and loans for,

(i) research or the training of persons relating to contaminants, pollution, waste or litter, and

(ii) the development of waste management facilities,

in such amounts and upon such terms and conditions as the regulations may prescribe;

(*h*) establish and operate demonstration and experimental waste management systems, litter disposal sites and sewage systems under Part VII;

(*i*) appoint committees to perform such advisory functions as the Minister considers advisable; and

(*j*) with the approval of the Lieutenant Governor in Council, enter into an agreement with any government or person relating to the protection or conservation of the natural environment. 1971, c. 86, s. 3; 1973, c. 94, s. 1.

Appointment of Directors

3*a*.—(1) The Minister shall appoint in writing such employees of the Ministry as he considers necessary as Directors in respect of such sections of this Act and in respect of such of the regulations or sections thereof as are set out in the appointments.

Limitation of authority of Director

(2) The Minister, in an appointment pursuant to subsection 1, may limit the authority of a Director in such manner as the Minister considers necessary or advisable. 1974, c. 20, s. 2.

PART II

GENERAL PROVISIONS

4. REPEALED: 1974, c. 20, s. 3.

Prohibition

5.—(1) No person shall deposit in, add to, emit or discharge into the natural environment any contaminant, and no person responsible for a source of contaminant shall permit the addition to, emission or discharge into the natural environment of any contaminant from the source of contaminant, in an amount, concentration or level in excess of that prescribed by the regulations.

Exception

(2) Subsection 1 does not apply to animal wastes disposed of in accordance with normal farming practices. 1971, c. 86, s. 5.

Control orders

6. When the report of a provincial officer, filed as provided by section 83, contains a finding that a contaminant added to, emitted or discharged into any part of the natural environment by any person or from any source of contaminant exceeds the maximum permissible amount, concentration or level prescribed by the regulations, contravenes section 14 or is a contaminant the use of which is prohibited by the regulations, the Director may issue a control order directed to the person responsible therefor. 1971, c. 86, s. 6.

Stop orders

7. When the Director, upon reasonable and probable grounds, is of the opinion that a source of contaminant is adding to, emitting or discharging into the natural environment any contaminant that constitutes, or the amount, concentration or level of which constitutes, an immediate danger to human life, the health of any persons, or to property, the Director may issue a stop order directed to the person responsible for the source of contaminant. 1971, c. 86, s. 7.

Approval of Director

8.—(1) No person shall,

(*a*) construct, alter, extend or replace any plant, structure, equipment, apparatus, mechanism or

thing that may emit or discharge or from which may be emitted or discharged a contaminant into any part of the natural environment other than water; or

(*b*) alter a process or rate of production with the result that a contaminant may be emitted or discharged into any part of the natural environment other than water or the rate or manner of emission or discharge of a contaminant into any part of the natural environment other than water may be altered,

unless he has first obtained a certificate of approval issued by the Director for the methods or devices or both to be employed to control or prevent the emission or discharge of any contaminant into any part of the natural environment other than water. 1972, c. 106, s. 2, *part*; 1974, c. 20, s. 4.

Director may require material

(2) The Director may require an applicant for a certificate of approval under subsection 1 to submit any plans, specifications and other information and to carry out and report on any tests or experiments relating to the plant, structure, equipment, apparatus, mechanism or thing or to the methods and devices to be employed to control or prevent the emission or discharge of any contaminant into any part of the natural environment other than water and, subject to subsection 4, the Director may issue a certificate of approval.

Exceptions

(3) Subsection 1 does not apply to,

(*a*) routine maintenance carried out on any plant, structure, equipment, apparatus, mechanism or thing;

(*b*) equipment for the combustion of fuel, other than waste incinerators, in buildings or structures designed for the housing of not more than three families;

(*c*) any equipment, apparatus, mechanism or thing in or used in connection with a building or structure designed for the housing of not more than three families where such equipment, apparatus, mechanism or thing may produce sound or vibration;

(*d*) any plant, structure, equipment, apparatus, mechanism or thing that may be a source of contaminant of a class exempted therefrom by the regulations;

(*e*) any plant, structure, equipment, apparatus, mechanism or thing used in agriculture;

(*f*) any motor or motor vehicle that is subject to the provisions of Part III.

Powers of Director

(4) The Director may refuse to issue a certificate of approval or may issue a certificate of approval on such terms and conditions or alter any terms and conditions in a certificate of approval as he considers necessary,

(*a*) to ensure that any construction, alteration, extension or replacement that is referred to in clause *a* of subsection 1 or that any alteration of a process or rate of production that is referred to in clause *b* of subsection 1, or the methods or devices or both employed to control or prevent the emission or discharge of any contaminant into any part of the natural environment other than water, will result in compliance with this Act and the regulations and any order or approval thereunder;

(*b*) on probable grounds, to prevent or alleviate a nuisance, a hazard to the health or safety of any person or impairment of the quality of the natural environment for any use that can be made of it. 1972, c. 106, s. 2, *part*.

9. REPEALED: 1972, c. 106, s. 2.

Submission of program

10.—(1) A person responsible for a source of contaminant may submit to the Director a program to prevent or to reduce and control the addition to, emission or discharge into the natural environment of any contaminant from the source of contaminant.

Referral of program

(2) When a program referred to in subsection 1 is submitted to the Director, the Director may, with the consent of the Minister, refer the program to the Environmental Council for its consideration and advice.

Approval of program

(3) The Director may issue an approval to be known as a "program approval", directed to the person who submitted the program. 1971, c. 86, s. 10.

Contents of approval

11. The Director shall, in a program approval,

(*a*) set out the name of the person to whom the approval is directed;

(*b*) set out the location and nature of the source of contaminant;

(*c*) set out the details of the program; and

(*d*) approve the program. 1971, c. 86, s. 11.

Approval not to prevent control or stop order

12. Notwithstanding the issue of a program approval, when the Director is of the opinion, based upon reasonable and probable grounds, that it is necessary or advisable for the protection or conservation of the natural environment, the prevention or control of an immediate danger to human life, the health of any persons or to property, the Director may issue a stop order or a control order directed to the person responsible. 1971, c. 86, s. 12.

Department to be notified when contamination exceeds permitted level

13.—(1) Every person who,

(*a*) deposits in, adds to, emits or discharges into the natural environment; or

(*b*) is the person responsible for a source of contaminant that deposits in, adds to, emits or discharges into the natural environment,

any contaminant in an amount, concentration or level in excess of that prescribed by the regulations shall forthwith notify the Department of the deposit, addition, emission or discharge, as the case may be.

Exception

(2) Subsection 1 does not apply to animal wastes disposed of in accordance with normal farming practices. 1971, c. 86, s. 13.

Prohibition

14.—(1) Notwithstanding any other provision of this Act or the regulations, no person shall deposit, add, emit or discharge a contaminant or cause or permit the deposit, addition, emission or discharge of a contaminant into the natural environment that,

(*a*) causes or is likely to cause impairment of the quality of the natural environment for any use that can be made of it;

(*b*) causes or is likely to cause injury or damage to property or to plant or animal life;

(*c*) causes or is likely to cause harm or material discomfort to any person;

(*d*) adversely affects or is likely to adversely affect the health of any person;

(*e*) impairs or is likely to impair the safety of any person; or

(*f*) renders or is likely to render any property or plant or animal life unfit for use by man. 1972, c. 106, s. 3.

Exception

(2) Clause *a* of subsection 1 does not apply to animal wastes disposed of in accordance with normal farming practices. 1971, c. 86, s. 14 (2).

When Ministry to be notified

15.—(1) Every person who deposits, adds, emits or discharges a contaminant or causes or permits the deposit, addition, emission or discharge of a contaminant into the natural environment out of the normal course of events that,

(*a*) causes or is likely to cause impairment of the quality of the natural environment for any use that can be made of it;

(*b*) causes or is likely to cause injury or damage to property or to plant or animal life;

(*c*) causes or is likely to cause harm or material discomfort to any person;

(*d*) adversely affects or is likely to adversely affect the health of any person;

(*e*) impairs or is likely to impair the safety of any person; or

(*f*) renders or is likely to render any property or plant or animal life unfit for use by man,

shall forthwith notify the Ministry. 1972, c. 106, s. 4.

Exception

(2) Subsection 1 does not apply to animal wastes disposed of in accordance with normal farming practices. 1971, c. 86, s. 15 (2).

Application of Part not restricted

16. Unless otherwise required by the context, the provisions of this Part also apply to the subject matter of the individual Parts of this Act. 1971, c. 86, s. 16.

Minister may order repair of damage

17. Where any person causes or permits the deposit, addition, emission or discharge into the natural environment of a contaminant that injures or damages land, water, property or plant life, the Minister, where he is of the opinion that it is in

the public interest so to do, may order such person to do all things and take all steps necessary to repair the injury or damage. 1971, c. 86, s. 17.

Equipment to alleviate effect of contaminant

18. When, in the opinion of the Director, based upon reasonable and probable grounds, it is necessary or advisable for the protection or conservation of the natural environment to do so, the Director may, by an order directed to any person, require that person to have on hand and available at all times such equipment and material as the order specifies to alleviate the effect of any contamination of the natural environment that may be caused or permitted by the person to whom the order is directed. 1971, c. 86, s. 18.

Order or approval binds successor or assignee

19.—(1) An order or approval of the Minister or the Director under this Act is binding upon the successor or assignee of the person to whom it is directed.

Index record

(2) The Department shall maintain an alphabetical index record of the names of all persons to whom orders or approvals are directed under this Act.

Removal of name from index record

(3) When an order or approval has expired or is revoked, the Department shall remove from the index record the name of the person to whom the order or approval is directed.

Search of index record

(4) The Department shall, upon the request of any person, make a search of the index record and inform the person making the request as to whether or not the name of a particular person appears in the index record and shall permit inspection of any order or approval relating to that person. 1971, c. 86, s. 19.

The Crown

20. The provisions of this Act are binding upon the Crown. 1971, c. 86, s. 20.

Subsisting regulations R.S.O. 1970, c. 16

21.—(1) Unless revoked or amended by the regulations made under this Act, the regulations made under *The Air Pollution Control Act*, that are in force immediately before this Act comes into force, shall remain in force as regulations made under this Act.

Subsisting reports, etc.

(2) Every report, recommendation, approval, order and notice made or given under *The Air Pollution Control Act* shall be deemed to be made or given, as the case may be, under this Act.

Transfer of proceedings

(3) Where any proceeding has been commenced before the Air Pollution Control Advisory Board, such proceeding shall be transferred to the Board under this Act.

Continuation of proceedings

(4) The Board may continue any proceeding referred to in subsection 3 upon receipt of a transcript, and may require the preparation and delivery of such transcript, of the proceeding certified by the secretary of the Air Pollution Control Advisory Board, or may require the proceeding or any part thereof to be commenced *de novo*.

Powers and duties of Board where proceedings transferred

(5) For the purpose of a proceeding referred to in subsection 3, the Board has the like powers and duties as the Air Pollution Control Advisory Board. 1971, c. 86, s. 21.

PART III

MOTORS AND MOTOR VEHICLES

Interpretation

22. In this Part,

. . . . . .

(*b*) "motor" means an internal combustion engine;

(*c*) "motor vehicle" means a vehicle that uses or incorporates a motor as a source of power. 1971, c. 86, s. 22; 1974, c. 20, s. 5.

Sale of motor vehicle that does not comply with regulations

23.—(1) No person shall sell, offer or expose for sale, a motor or motor vehicle that does not comply with the regulations.

Where system or device installed on motor vehicle

(2) Where a manufacturer installs on, attaches to or incorporates in any motor or motor vehicle, a system or device to prevent or lessen the emission of any contaminant, no person shall sell, offer or expose for sale, such motor or motor vehicle unless the motor or motor vehicle has such system or device so installed, attached or incorporated and such system or device, when the motor or motor vehicle is operating, complies with the regulations.

Repair or replacement of system or device

(3) Where a manufacturer installs on, attaches to or incorporates in any motor or motor vehicle, a system or device to prevent or lessen the emission of any contaminant, no person shall remove or cause or permit the removal of such system or device from such motor or motor vehicle, except for repair of such system or device or for replacement of such system or device by a system or device of the same type. 1973, c. 94, s. 2, *part*.

Operation of motor or motor vehicle

24.—(1) Except where necessary for test or repair purposes, no person shall operate or cause or permit the operation of a

motor or motor vehicle or any class or type thereof that does not comply with the regulations.

Where system or device required

(2) Where a manufacturer installs on, attaches to or incorporates in any motor or motor vehicle a system or device to prevent or lessen the emission of any contaminant, the owner of such motor or motor vehicle shall not operate or cause or permit the operation of such motor or motor vehicle nor shall any person knowingly operate or cause or permit its operation unless such motor or motor vehicle has installed on, attached to or incorporated in it such system or device, and such system or device operates in accordance with the regulations when the motor or motor vehicle is in operation. 1973, c. 94, s. 2, *part*.

PART IV

WATER

25. REPEALED: 1974, c. 20, s. 6.

26. REPEALED: 1974, c. 20, s. 7.

Interpretation

26*a*.—(1) In this section,

(*a*) "ice shelter" means any structure that is located on or over ice over any water for more than one day and that is or may be used for shelter, privacy or the storage or sale of any thing;

(*b*) "owner", when used in relation to an ice shelter, includes a person who has the right to use or occupy the ice shelter;

(*c*) "waste" means human excrement or any refuse that is discharged or deposited in or from an ice shelter.

Discharge or deposit of waste prohibited

(2) No person shall discharge or deposit or cause or permit to be discharged or deposited any waste upon or over the ice over any water except in accordance with the regulations.

Removal of ice shelter by provincial officer

(3) Except as provided in subsection 4, where an ice shelter is placed or allowed to remain on ice over any water in contravention of any provision of the regulations, a provincial officer may remove the ice shelter or cause it to be removed,

(*a*) where the provincial officer is able to determine the name and address of the owner, after service of notice upon the owner at least seven days before the date of the removal; or

(*b*) where the provincial officer is unable to determine the name and address of the owner, forthwith.

Idem, out of season

(4) Where an ice shelter is placed or allowed to remain on ice over any water beyond the dates prescribed by the regulations within which ice shelters may be placed, allowed to remain or used on or over ice over any water, a provincial officer may remove the ice shelter or cause it to be removed without serving prior notice upon the owner, but where the provincial officer is able to determine the name and address of the owner, notice of the removal shall be served upon the owner forthwith after the removal.

Where owner may retake possession of ice shelter

(5) Except where an ice shelter has been destroyed in the course of removal, the owner of an ice shelter that has been removed pursuant to subsection 3 or 4 may take possession of the ice shelter within thirty days of the removal or of service of the notice mentioned in subsection 3, whichever is later, or within thirty days after service of the notice mentioned in subsection 4, as the case requires, upon payment to the Treasurer of Ontario of the costs and charges for removal and storage of the ice shelter.

Where provincial officer may dispose of ice shelter

(6) Where the owner of an ice shelter that has been removed pursuant to subsection 3 or 4 does not take possession of the ice shelter pursuant to subsection 5,

(*a*) a provincial officer may dispose of the ice shelter without compensation therefor; and

(*b*) the owner is divested of ownership of the ice shelter and, where the ice shelter is disposed of to any person, such person shall acquire ownership of the ice shelter free from any right, title or interest of any other person.

Notice

(7) A notice under subsection 3 or 4 shall be in such form as the regulations may prescribe and shall state that the owner may take possession of the ice shelter pursuant to subsection 5 and that, if such owner does not so take possession, the ice shelter may be disposed of without compensation therefor and, where the ice shelter has been removed or caused to be removed pursuant to subsection 4 and has been damaged or destroyed in the course of the removal, the notice shall state the condition of the ice shelter.

Means of removal

(8) A provincial officer shall use due care in removing an ice shelter pursuant to subsection 3 or 4 but may use a means of removal that causes damage to or the destruction of the ice shelter if the use of the means of removal is necessary in order to carry out the removal.

(9) Where an ice shelter is removed pursuant to subsection 3 or 4 and the means of removal that is necessary in the circumstances results in damage to or the destruction of the ice shelter, the owner of the ice shelter is not entitled to compensation for the damage or destruction. 1973, c. 94, s. 4, *part*.

Damage or destruction during removal

26*b*. REPEALED: 1974, c. 20, s. 8.

27.—(1) Unless revoked or amended by the regulations made under this Act,

Regulations to continue in force

(*a*) Regulation 644 of Revised Regulations of Ontario, 1970; and

(*b*) Regulation 646 of Revised Regulations of Ontario, 1970,

as amended from time to time shall remain in force as regulations made under this Act. 1971, c. 86, s. 27 (1).

(2) Every order, direction, requirement and permit given or made under section 26, 27*a*, 27*b* or 50 of *The Ontario Water Resources Act* shall be deemed to be made or given, as the case may be, under this Act and every such order, direction, requirement and permit, except an order under section 26 of that Act, shall continue in force until revoked, suspended or varied by the Director. 1971, c. 86, s. 27 (2); 1972, c. 1, s. 70 (1); 1974, c. 20, s. 9 (1).

Subsisting orders, etc. R.S.O. 1960, c. 281

(3) The Director may by order revoke, suspend or vary an order, direction or requirement referred to in subsection 2, other than an order under section 26 of *The Ontario Water Resources Act*, in order to,

Powers of Director

(*a*) carry out the purposes of this Act; and

(*b*) require any person or source of contaminant to comply with the provisions of this Act and the regulations. R.S.O. 1970, c. 86, s. 27 (3); 1972, c. 1, s. 70 (1).

(4) REPEALED: 1974, c. 20, s. 9 (2).

(5) In the case of an order under section 26 of *The Ontario Water Resources Act*, the Director may apply to the court to continue, vary or terminate the order on such terms and conditions as the judge considers proper. 1971, c. 86, s. 27 (5); 1972, c. 1, s. 70 (1).

Director may apply to court to continue, etc., order

PART V

WASTE MANAGEMENT

Interpretation

28. In this Part,

. . . . . .

(*b*) "operator" means the person in occupation or having the charge, management, or control of a waste management system or a waste disposal site;

(*c*) "owner" includes,

(i) a person that is responsible for the establishment or operation of a waste management system or waste disposal site, or

(ii) the person that owns the land in or on which a waste disposal site is located;

(*ca*) "owner" in section 46*a*, means a person that is responsible for the operation of a well that is a waste disposal site;

(*d*) "waste" includes ashes, garbage, refuse, domestic waste, industrial waste, or municipal refuse and such other wastes as are designated in the regulations;

(*e*) "waste disposal site" means any land or land covered by water upon, into, in or through which, or building or structure in which, waste is deposited or processed and any machinery or equipment or operation required for the treatment or disposal of waste;

(*f*) "waste management system" means all facilities, equipment and operations for the complete management of waste, including the collection, handling, transportation, storage, processing and disposal thereof, and may include one or more waste disposal sites. 1971, c. 86, s. 28; 1972, c. 1, s. 69 (2); 1972, c. 106, s. 5; 1974, c. 20, s. 10.

Application of Part

29. This Part does not apply to the storage or disposal by any person of his domestic wastes on his own property unless the Director is of the opinion, based upon reasonable and probable grounds, that such storage or disposal is or is likely to create a nuisance, or to any sewage or other works to which *The Ontario Water Resources Act* or the regulations thereunder apply. 1971, c. 86, s. 29; 1972, c. 106, s. 6.

R.S.O. 1970, c. 332

Certificate of approval

30. No waste management system that is in operation or waste disposal site that is in use when this Act comes into force shall be operated or used,

(*a*) after a certificate of approval has been refused; or

(*b*) where a certificate of approval or provisional certificate of approval has been issued, except in accordance with the terms and conditions of such certificate. 1971, c. 86, s. 30.

New systems, sites and extensions

31. No person shall use, operate, establish, alter, enlarge or extend,

(*a*) a waste management system; or

(*b*) a waste disposal site,

unless a certificate of approval or provisional certificate of approval therefor has been issued by the Director and except in accordance with any conditions set out in such certificate. 1971, c. 86, s. 31.

No money by-law without certificate

32. No by-law for raising money to finance any work under section 31 shall be passed by the council of a municipality until a certificate of approval or a provisional certificate of approval has been issued therefor. 1971, c. 86, s. 32.

Relief from assent of electors

33. Where the Minister reports in writing to the clerk of a municipality that he is of the opinion that it is necessary in the public interest that waste be collected or a waste management system or any part thereof be established, maintained, operated, improved, extended, enlarged, altered, repaired or replaced, it is not necessary to obtain the assent of the electors to any by-law for incurring a debt for any such purpose, and the municipality shall forthwith do every possible act and thing in its power to implement the report of the Minister within the time specified. 1971, c. 86, s. 33.

When public hearing required

33*a*.—(1) Where the Director receives an application for a certificate of approval for the use, operation, establishment, alteration, enlargement or extension of a waste disposal site for the disposal of hauled liquid industrial waste or hazardous waste as designated in the regulations or any other waste that the Director ascertains, having regard to the nature and quantity of the waste, is the equivalent of the domestic waste of not less than 1,500 persons, the Director shall, before issuing or refusing to issue the certificate of approval, hold a public hearing. 1972, c. 106, s. 7, *part*; 1974, c. 20, s. 11.

Notice of hearing

(2) At least fifteen days notice of the hearing shall be given to the clerk of the municipality in or into which it is proposed to use, operate, establish, alter, enlarge or extend the waste disposal site and to the owners or occupants of the lands adjoining the land upon or in which the waste disposal site is or is intended to be located and to such other persons and in such manner as the Director may direct and such notice shall be published once a week for three consecutive weeks in a newspaper having general circulation in the locality where the waste disposal site is or is intended to be located provided there is a newspaper having general circulation in the locality and published at least once a week. 1972, c. 106, s. 7, *part*; 1974, c. 20, s. 11.

Where emergency situation exists

33*b*. Notwithstanding the provisions of section 33*a*, where, in the opinion of the Director, an emergency situation exists by reason of,

(*a*) danger to the health or safety of any person;

(*b*) impairment or immediate risk of impairment of the quality of the natural environment for any use that can be made of it; or

(*c*) injury or damage or immediate risk of injury or damage to any property or to any plant or animal life,

and the emergency situation will be alleviated by the use, operation, establishment, alteration, enlargement or extension of a waste disposal site, the Director may issue a certificate of approval therefor without holding a public hearing. 1972, c. 106, s. 7, *part*; 1974, c. 20, s. 11.

Where public hearing may be held

33*c*.—(1) Where the Director receives an application for a certificate of approval for the use, operation, establishment, alteration, extension or enlargement of,

(*a*) a waste management system that does not include a waste disposal site referred to in section 33*a*; or

(*b*) a waste disposal site other than a waste disposal site referred to in section 33*a*,

the Director may, before issuing or refusing to issue the certificate of approval, hold a public hearing. 1972, c. 106, s. 7, *part*; 1974, c. 20, s. 11.

Notice of hearing

(2) Where a hearing is held under subsection 1, at least fifteen days notice shall be given to the clerk of the munici-

pality in or into which it is proposed to use, operate, establish, alter, extend or enlarge the waste management system or waste disposal site and to the owners or occupants of the lands adjoining any land upon or in which the waste disposal site is located or is intended to be located and to such other persons and in such manner as the Director may direct. 1972, c. 106, s. 7, *part*; 1974, c. 20, s. 11.

Director may require Hearing Board to hold public hearing

33*d*.—(1) Where the Director is required or permitted to hold a hearing under this Act, he may by a notice in writing, and on such terms and conditions as he may direct, require the Hearing Board to hold the hearing. 1972, c. 106, s. 7, *part*; 1974, c. 20, s. 11.

When Hearing Board to hold public hearing

(2) Upon receipt of notice from the Director, the Hearing Board shall hold a public hearing with respect to the subject-matter of the notice and shall report thereon to the Director. 1972, c. 106, s. 7, *part*; 1974, c. 20, s. 11.

Procedure

R.S.O. 1970, c. 332

(3) Except where inconsistent with subsections 1 and 2, the provisions of section 9*a* of *The Ontario Water Resources Act* apply where a public hearing is held under subsections 1 and 2 by the Hearing Board. 1972, c. 106, s. 7, *part*.

Director to consider report of Hearing Board

(4) Where the Director requires the Hearing Board to hold a public hearing, the Director shall not issue or refuse to issue a certificate of approval until he has received and considered the report of the Hearing Board. 1972, c. 106, s. 7, *part*; 1974, c. 20, s. 11.

33*e*. REPEALED: 1974, c. 20, s. 12.

Condition precedent to issue of certificate

34. No certificate of approval shall be issued to an applicant other than a municipality unless the applicant has,

(*a*) deposited a sum of money; or

(*b*) furnished a surety bond; or

(*c*) furnished personal sureties,

in such amount and upon such conditions as the regulations prescribe to assure satisfactory maintenance of the waste management system or the waste disposal site or the removal of waste from the site if the Director considers such removal necessary. 1971, c. 86, s. 34.

Hearing as to by-law

35.—(1) Where a by-law of a municipality affects the location or operation of a proposed waste disposal site, the Minister, upon the application of the person applying for a

certificate of approval for the waste disposal site, may, by a notice in writing, and on such terms and conditions as he may direct, require the Hearing Board to hold a public hearing to consider whether or not the by-law should apply to the proposed waste disposal site.

When Hearing Board to hold public hearing

(2) Upon receipt of notice from the Minister, the Hearing Board shall hold a public hearing with respect to the subject-matter of the notice and shall report thereon to the Minister.

Procedure

R.S.O. 1970, c. 332

(3) Except where inconsistent with subsections 1 and 2, the provisions of section 9*a* of *The Ontario Water Resources Act* apply where a public hearing is held under subsections 1 and 2 by the Hearing Board.

Parties and procedure

(4) Where the Minister requires a public hearing under subsection 1,

(*a*) the applicant, the municipality and any other person specified by the Hearing Board shall be given notice of the hearing in such manner as the Hearing Board directs; and

(*b*) the Hearing Board shall hold the public hearing within the municipality within which it is proposed to locate the waste disposal site.

Order

(5) The Minister, after receiving the report of the Hearing Board, may order that the by-law referred to in subsection 1 does not apply to the proposed waste disposal site and the by-law shall thereupon be deemed not to apply thereto. 1972, c. 106, s. 8.

Return of deposit

36. The deposit mentioned in clause *a* of section 34 may be returned to the depositor upon such terms and conditions as the regulations prescribe. 1971, c. 86, s. 36.

37. REPEALED: 1972, c. 106, s. 9.

Information to be furnished

38. An applicant for a certificate of approval shall submit to the Director plans and specifications of the work to be undertaken together with such other information as the Director may require. 1971, c. 86, s. 38.

Powers of Director

39.—(1) The Director after considering an application for a certificate of approval, may issue a certificate of approval or provisional certificate of approval. 1971, c. 86, s. 39 (1); 1972, c. 106, s. 10 (1); 1974, c. 20, s. 13 (1).

Powers of Director

(2) The Director may,

(*a*) refuse to issue or renew;

(*b*) suspend or revoke; or

(*c*) impose, alter or revoke terms and conditions in,

a certificate of approval or provisional certificate of approval where,

(*d*) the waste management system or the waste disposal site does not comply with this Act or the regulations; or

(*e*) he considers, upon probable grounds, that the use, establishment, operation, alteration, enlargement or extension of the waste management system or the waste disposal site may create a nuisance, is not in the public interest or may result in a hazard to the health or safety of any person. 1972, c. 106, s. 10 (2); 1974, c. 20, s. 13 (2).

Prohibition as to deposit of waste

40. No person shall deposit waste upon, in, into or through any land or land covered by water or in any building that is not a waste disposal site for which a certificate of approval or a provisional certificate of approval has been issued and except in accordance with the terms and conditions of such certificate. 1971, c. 86, s. 40; 1972, c. 106, s. 11.

Prohibition as to use of facilities, etc.

41. No person shall use any facilities or equipment for the storage, handling, treatment, collection, transportation, processing or disposal of waste that is not part of a waste management system for which a certificate of approval or a provisional certificate of approval has been issued and except in accordance with the terms and conditions of such certificate. 1971, c. 86, s. 41.

Order for removal of waste

42.—(1) Where waste has been deposited upon, in, into or through any land or land covered by water or in any building that has not been approved as a waste disposal site, the Director may order the occupant or the person having charge and control of such land or building to remove the waste and to restore the site to a condition satisfactory to the Director. 1971, c. 86, s. 42 (1); 1972, c. 106, s. 12 (1); 1974, c. 20, s. 14.

Action upon failure to comply with order

(2) Where a person to whom an order is directed under subsection 1 fails to comply with the order, the Director may cause the necessary work to be done and charge such person with the cost thereof, which may be recovered with costs in any court of competent jurisdiction. 1971, c. 86, s. 42 (2); 1972, c. 106, s. 12 (2); 1974, c. 20, s. 14.

Order by Director

43. Where a waste management system or a waste disposal site is not in conformity with this Part or the regulations, the Director may order the owner to take such action as he may require to bring the system or the site into conformity with this Part or the regulations within the time specified in the order. 1971, c. 86, s. 43; 1972, c. 106, s. 13; 1974, c. 20, s. 14.

Action upon non-compliance with order

44. Where an owner fails to comply with an order under section 43, the Director may cause the necessary work to be done and charge the owner with the cost thereof which, in the case of an owner other than a municipality, may be deducted from the deposit mentioned in section 34, or may be recovered with costs in any court of competent jurisdiction. 1971, c. 86, s. 44; 1972, c. 106, s. 14; 1974, c. 20, s. 14.

Right to compensation

45.—(1) Within thirty days after the receipt of notice that the Director has refused to renew or has suspended or revoked a certificate of approval, any owner who has suffered pecuniary loss as a result of such decision affecting his waste disposal site or waste management system may apply to the Director for compensation for such loss where such owner,

(*a*) has received a certificate of approval for the waste disposal site or waste management system affected by the Director's decision; and

(*b*) since receiving such certificate of approval, has strictly complied with this Act and the regulations. 1971, c. 86, s. 45 (1); 1972, c. 106, s. 15 (1); 1974, c. 20, s. 14.

Notice of decision and right to appeal

(2) A notice of the decision of the Director in disposing of the application and a notice stating the right to an appeal under this section shall be served on the owner either personally or by registered mail addressed to the owner at his last known address. 1971, c. 86, s. 45 (2); 1972, c. 106, s. 15 (2); 1974, c. 20, s. 14.

Right to appeal

(3) Within fifteen days after receipt of the notices referred to in subsection 2, the owner may by written notice received by the Ministry and the Board, appeal the amount of compensation, if any, to the Board, and such appeal shall be a hearing *de novo* and the Board may dismiss the appeal or alter the decision of the Director establishing the amount of the compensation, if any, and the decision of the Board shall be final. 1971, c. 86, s. 45 (3); 1972, c. 1, s. 1; 1972, c. 106, s. 15 (3); 1974, c. 20, s. 14.

Payment of compensation

(4) Where the Director or the Board, as the case may be, has established the amount of the compensation, if any, the Minister shall certify the amount thereof to the Treasurer of Ontario and the Treasurer shall pay such amount to the person entitled thereto out of the Consolidated Revenue Fund. 1971, c. 86, s. 45 (4); 1972, c. 106, s. 15 (4); 1974, c. 20, s. 14.

Former disposal sites

46. No use shall be made of land or land covered by water which has been used for the disposal of waste within a period of twenty-five years from the year in which such land ceased to be so used unless the approval of the Minister for the proposed use has been given. 1971, c. 86, s. 46.

Security Fund

46*a*.—(1) There shall be an account in the Consolidated Revenue Fund to be known as "The Waste Well Disposal Security Fund", referred to in this section as the "Fund", into which shall be paid the prescribed fees received under this Act.

Interest

(2) Interest shall be credited to the Fund out of the Consolidated Revenue Fund at a rate to be determined from time to time by the Lieutenant Governor in Council, and such interest shall be made up at the close of each fiscal year upon the balance in the Fund at the end of the previous calendar year.

Owner of waste disposal well to pay fee

(3) The owner of every well that is a waste disposal site shall pay a fee calculated upon the amount and type of waste disposed of in the well.

Fee paid to Treasurer

(4) The fee shall be paid to the Treasurer of Ontario for payment into the Fund.

Calculation and payment of fee

(5) The fee shall be at the rate or rates prescribed by the regulations, shall be paid upon the amount and type of waste disposed of in the well in each calendar year and shall be paid in advance in each calendar year. 1972, c. 106, s. 16, *part*.

Estimate by Director

(6) The Director shall estimate the amount of the fee for each calendar year based upon the amount and type of waste disposed of in the well in the previous calendar year and where waste was not disposed of in the well in the previous calendar year the Director shall estimate the fee on the basis of the amount and type of waste that in his opinion will be disposed of in the well in the current calendar year and may revise such estimate at any time before payment of the estimated fee as required by subsection 7. 1972, c. 106, s. 16, *part*; 1974, c. 20, s. 15.

Payment of estimated fee

(7) The estimated fee for each calendar year shall be paid within thirty days after receipt of the notice or revised notice by the owner of the well of the amount of the fee estimated by the Director. 1972, c. 106, s. 16, *part*; 1974, c. 20, s. 15.

Adjustment of fee

(8) At the end of each calendar year, the Director shall calculate the amount of the fee for the year and,

(*a*) where the fee estimated and paid for the year is less than the calculated fee, the Director shall add the difference to the estimated fee for the next calendar year or may, by a notice in writing, require the owner of the well to pay the difference forthwith to the Treasurer of Ontario; and

(*b*) where the fee estimated and paid for the year is greater than the calculated fee, the Director shall deduct the difference from the estimated fee for the next calendar year or may certify to the Treasurer of Ontario the amount of such difference and the Treasurer shall pay such amount to the owner of the well. 1972, c. 106, s. 16, *part*; 1974, c. 20, s. 15.

Person suffering damage to be compensated

(9) Where the water in any well, lake, river, pond, spring, stream, reservoir or other water or watercourse that any person takes for ordinary household purposes or for the watering of live stock, poultry, home gardens or lawns, or for the watering or irrigation of crops grown for sale, is rendered unfit for such use by reason of the operation of any well that is a waste disposal site, the person is entitled to have compensation paid to him out of the Fund so far as the Fund is sufficient for that purpose, having regard to any other charges thereon, if he gives notice to the Director forthwith after becoming aware that the water has been rendered unfit and makes a claim therefor under subsection 10 within six months, or such longer period of time as may be determined by the Director, from the date that the Director received the notice that the water has been rendered unfit. 1972, c. 106, s. 16, *part*; 1974, c. 20, s. 15.

Claim for compensation

(10) A person claiming to be entitled to compensation out of the Fund shall make application therefor to the Director in writing, setting out therein his full name and address and the particulars of his claim and shall furnish to the Director such additional information with respect to the subject-matter of the claim that the Director may require and that is within his knowledge. 1972, c. 106, s. 16, *part*; 1974, c. 20, s. 15.

Determination by Director

(11) The Director shall investigate or cause an investigation to be made and shall determine whether there are reasonable grounds for believing that the water referred to in subsection 9 has been rendered unfit for any of the purposes set out therein and for which it was used and that it has been rendered unfit by the disposal of waste in any well that is a waste disposal site and in such case shall determine the amount of the claimant's reasonable and necessary expenses incurred in obtaining an alternate supply of water substantially equivalent in quantity and quality to such water. 1972, c. 106, s. 16, *part*; 1974, c. 20, s. 15.

Director's certificate

(12) The Director shall set out his determination in a certificate together with written reasons therefor and send a copy thereof to the claimant by registered mail at the address set out in the application. 1972, c. 106, s. 16, *part*; 1974, c. 20, s. 15.

When certificate final

(13) The certificate of the Director is final at the end of thirty days from the date of mailing it to the claimant unless notice of appeal is served within that time. 1972, c. 106, s. 16, *part*; 1974, c. 20, s. 15.

Appeal

(14) The claimant may appeal to the Board at any time before the certificate of the Director becomes final and the procedure thereon shall be the same as upon an appeal from an order of the Director under Part X. 1972, c. 106, s. 16, *part*; 1974, c. 20, s. 15.

Payment out of Fund

(15) Where the Director has sent his certificate by registered mail to the claimant and the time for any appeal has expired or, where an appeal is taken, it is disposed of, and it is finally determined that the claimant is entitled to payment of compensation out of the Fund, the Director shall certify to the Treasurer of Ontario the sum found to be payable and the Treasurer shall pay such sum to the claimant out of the Fund. 1972, c. 106, s. 16, *part*; 1974, c. 20, s. 15.

Recovery of money

(16) Where a claimant who has received any payment out of the Fund recovers any moneys, directly or indirectly, from the owner of a well that is a waste disposal site, in respect of the expenses for which the payment was made out of the Fund, the claimant shall repay to the Treasurer of Ontario for credit to the Fund an amount equal to the payment out of the Fund or the moneys received from the owner of the well, whichever is the lesser, and such amount may be recovered with costs in any court of competent jurisdiction as a debt due to the Crown.

Recovery of fees owing

(17) Any fee or any difference between the estimated fee and the calculated fee referred to in clause *a* of subsection 8 that is payable under this section may be recovered in any court of competent jurisdiction as a debt due to the Crown. 1972, c. 106, s. 16, *part*.

Offences

47. Every person or municipality that contravenes any provision of this Part or the regulations or fails to comply with an order made under section 42 or 43 or fails to comply with any term or condition of a certificate of approval or provisional certificate of approval is guilty of an offence and on summary conviction is liable to a fine of not more than $2,000 for every day or part thereof upon which such offence occurs or continues. 1971, c. 86, s. 47; 1972, c. 106, s. 17.

Existing applications, certificates, etc.

R.S.O. 1970, c. 491

48.—(1) Every application for a certificate of approval, every refusal of a certificate of approval and every certificate of approval or provisional certificate of approval issued under *The Waste Management Act* shall be deemed to be made, refused or issued, as the case may be, under this Act.

Transfer of proceedings

(2) Where any proceeding has been commenced before the Advisory Board or the Appeal Board under *The Waste Management Act*, such proceeding shall be transferred to the Board under this Act.

Subsisting notices, etc.

(3) Every notice, report, recommendation, decision and order made or given under *The Waste Management Act* shall be deemed to be made or given, as the case may be, under this Act.

Subsisting regulations

(4) Every regulation made under *The Waste Management Act* that is in force immediately before this Act comes into force shall remain in force until revoked by the regulations.

Continuation of proceedings

(5) The Board may continue any proceeding referred to in subsection 2 upon receipt of a transcript, and may require the preparation and delivery of such transcript, of the proceeding certified by the chairman or vice-chairman of the Advisory Board or the Appeal Board under *The Waste Management Act*, or may require the proceeding or any part thereof to be commenced *de novo*.

Powers and duties of Board when proceedings transferred

(6) For the purpose of a proceeding referred to in subsection 2, the Board has the like powers and duties as the Advisory Board or the Appeal Board, as the case may be, under *The Waste Management Act*. 1971, c. 86, s. 48.

Waste disposal in wells

(7) An approval of the disposal of waste or mineral water as waste in an underground formation given or made under

The Petroleum Resources Act, 1971, or any predecessor thereof, or the regulations thereunder shall be deemed to be a certificate of approval under this Part and shall continue in force according to its terms and the Director may amend or revoke the approval in accordance with this Act and the regulations thereunder. 1972, c. 1, s. 69 (3). 1971, c. 94

PART VI

ABANDONED MOTOR VEHICLES

Interpretation

49. In this Part,

(*a*) "abandoned motor vehicle" means a vehicle that has been left unattended without lawful authority and that appears to an officer, by reason of its age, appearance, mechanical condition or lack of licence plates, to be abandoned;

(*b*) "abandoned motor vehicle site" means,

(i) a waste disposal site,

A. that is classified by the regulations as a derelict motor vehicle site,

B. that is not exempt under the regulations relating to Part V or Part VI, and

C. for which a certificate of approval or a provisional certificate of approval has been issued pursuant to Part V, or

(ii) any place that is approved in writing by the Director for the purpose of receiving and storing abandoned motor vehicles;

. . . . . .

(*d*) "officer" means a provincial officer or a member of the Ontario Provincial Police Force or the police force in the area where an abandoned motor vehicle is found. 1973, c. 94, s. 5, *part*; 1974, c. 20, s. 16.

Removal of abandoned motor vehicle

50. An officer may remove or cause to be removed an abandoned motor vehicle to an abandoned motor vehicle site. 1973, c. 94, s. 5, *part*.

Notice to owner

51. Where an officer has removed an abandoned motor vehicle to an abandoned motor vehicle site, the officer shall forthwith serve notice in writing of the removal on the owner of the vehicle at the latest address shown on the records of

the Ministry of Transportation and Communications when the officer causes the records to be examined or on the records, if any, on or in the vehicle unless the name and address of the owner cannot be determined. 1973, c. 94, s. 5, *part*.

Contents of notice

52. A notice under section 51 shall,

(*a*) contain a description of,

(i) the abandoned motor vehicle,

(ii) the place from which and the abandoned motor vehicle site to which the abandoned motor vehicle was removed,

(iii) the date of removal, and

(iv) the identification of the officer who removed or caused the removal of the abandoned motor vehicle;

(*b*) state,

(i) that if the abandoned motor vehicle is not claimed by the owner or any other person having a right or interest in the vehicle within thirty days from the date of service of the notice, the abandoned motor vehicle will be sold or otherwise disposed of by the person having the charge and control of the abandoned motor vehicle site, and

(ii) that the owner shall forthwith upon receipt of the notice notify any person having a right or interest in the abandoned motor vehicle, of whom he has knowledge, of the receipt and contents of the notice of removal. 1973, c. 94, s. 5, *part*.

Where owner may retake possession

53. The owner or any person having a right or interest in an abandoned motor vehicle may take possession of the abandoned motor vehicle within thirty days after the date of service of the notice referred to in section 51 or, where notice of removal has not been served, within thirty days after the date of removal of the vehicle on payment to the person having the charge and control of the abandoned motor vehicle site of all costs and charges, if any, for removal of the vehicle to and all costs and charges, if any, for storage of the vehicle at the abandoned motor vehicle site. 1973, c. 94, s. 5, *part*.

Disposal of vehicle

54. Where an abandoned motor vehicle has not been claimed by the owner or any person having a right or interest in the abandoned motor vehicle pursuant to section 53, the person having the charge and control of the abandoned motor vehicle site shall sell or otherwise dispose of the vehicle and shall apply the proceeds of the sale or other disposition firstly, in payment of all costs and charges, if any, for removal of the vehicle to the abandoned motor vehicle site, and secondly, in payment of all costs and charges, if any, for storage of the vehicle at the site, and any surplus shall be paid to the Treasurer of Ontario. 1973, c. 94, s. 5, *part*.

55. REPEALED: 1974, c. 20, s. 17.

Ownership

55*a*. Where an abandoned motor vehicle is sold or otherwise disposed of pursuant to section 54, the owner or any person having a right or interest in the vehicle is divested of the ownership of or other right or interest in the vehicle and the person who has acquired the vehicle on a disposition pursuant to section 54 acquires the ownership of the vehicle free from any right or interest of any other person in the vehicle. 1973, c. 94, s. 5, *part*.

Compensation

55*b*. Where an owner or other person having a right or interest in an abandoned motor vehicle that is disposed of pursuant to section 54 does not, acting in good faith through any cause beyond his control, receive notice of removal of the vehicle or does not otherwise acquire knowledge of such removal before the disposition and such owner or other person suffers loss as a result of such disposition, such owner or other person may apply to the Director for compensation upon giving notice to the Director forthwith after becoming aware of the disposition and upon applying therefor pursuant to section 55*c* within six months from the date the notice of removal, if any, is served or, where no notice of removal is served, from the date of removal of the vehicle to an abandoned motor vehicle site. 1973, c. 94, s. 5, *part*.

Claim for compensation

55*c*. A person applying for compensation pursuant to section 55*b* shall make application therefor to the Director in writing, setting out therein his full name and address and the particulars of his claim and shall furnish to the Director such additional information with respect to the subject-matter of the claim that the Director may require and that is within his knowledge. 1973, c. 94, s. 5, *part*.

Director's certificate

55*d*. The Director may award compensation under section 55*b* in such amount and on such terms and conditions as appear just under the circumstances and shall set out his award in a certificate together with written reasons therefor and send a

copy thereof to the applicant by registered mail at the address set out in the application. 1973, c. 94, s. 5, *part*.

When certificate final

55*e*. The certificate of the Director is final at the end of thirty days from the date of mailing it to the applicant unless notice of appeal is served within that time. 1973, c. 94, s. 5, *part*.

Appeal

55*f*. The applicant may appeal to the Board at any time before the certificate of the Director becomes final and the procedure thereon shall be the same as upon an appeal from an order of the Director under Part X. 1973, c. 94, s. 5, *part*.

Payment

55*g*. Where the Director has sent his certificate by registered mail to the applicant and the time for any appeal has expired or, where an appeal is taken, it is disposed of, and it is finally determined that the applicant is entitled to payment of compensation, the Director shall certify to the Treasurer of Ontario the sum found to be payable and the Treasurer shall pay such sum to the applicant out of the Consolidated Revenue Fund. 1973, c. 94, s. 5, *part*.

Recovery of moneys

55*h*. Where an applicant who has received any payment out of the Consolidated Revenue Fund pursuant to section 55*g* recovers any moneys, directly or indirectly, from any person in respect of the loss for which the payment was made out of the Consolidated Revenue Fund, the applicant shall repay to the Treasurer of Ontario for credit to the Consolidated Revenue Fund an amount equal to the payment out of the Consolidated Revenue Fund or the moneys received from such person, whichever is the lesser, and such amount may be recovered with costs in any court of competent jurisdiction as a debt due to the Crown. 1973, c. 94, s. 5, *part*.

PART VII

SEWAGE SYSTEMS

Interpretation

56. In this Part,

. . . . . .

(*c*) "sewage system" means,

(i) a cesspool, a septic tank system, a leaching pit, a leaching bed, a privy, a privy-vault, a holding tank other than a holding tank to which regulations made under clause *n* or *o* of subsection 1 of section 62 of *The Ontario Water Resources Act* apply, a toilet other than a

R.S.O. 1970, c. 332

toilet to which regulations made under clause *f* of subsection 1 of section 62 of *The Ontario Water Resources Act* apply and any other sewage works referred to in clause *a* or *c* of subsection 6 of section 42 of *The Ontario Water Resources Act* or any part of any of them, or R.S.O. 1970, c. 332

(ii) works, installations, equipment and operations for the collection, handling, treatment, transportation, storage, processing and disposal of hauled sewage as designated in the regulations, and includes any land used in connection therewith, but does not include plumbing as defined in the regulations under *The Ontario Water Resources Act*. 1972, c. 106, s. 23, *part*; 1974, c. 20, s. 18.

Exception

56*a*. Notwithstanding any provision of *The Ontario Water Resources Act*, a sewage system that is subject to the provisions of this Part is not subject to the provisions of *The Ontario Water Resources Act*. 1972, c. 106, s. 23, *part*.

56*b*. REPEALED: 1974, c. 20, s. 19.

Prohibition

57. No person shall construct, install, establish, enlarge, extend or alter,

(*a*) any building or structure in connection with which a sewage system will be used if the use of the building or structure so constructed, installed, established, enlarged, extended or altered will or is likely to affect the operation or effectiveness of the sewage system; or

(*b*) any sewage system,

unless a certificate of approval for the construction, installation, establishment, enlargement, extension or alteration of the sewage system has first been issued by the Director. 1972, c. 106, s. 23, *part*.

Application

58. An applicant for a certificate of approval under this Part shall submit to the Director plans and specifications of any work to be undertaken upon issuance of the certificate of approval and such other information as the Director may require and, subject to section 59, the Director may issue a certificate of approval. 1972, c. 106, s. 23, *part*.

Powers of Director

59. The Director may,

(*a*) refuse to issue;

(*b*) suspend or revoke; or

(*c*) impose, alter or revoke terms and conditions in,

a certificate of approval where,

(*d*) the sewage system or the proposed establishment, construction, operation, installation, enlargement, extension or alteration of the sewage system does not comply with the provisions of this Act or the regulations; or

(*e*) he considers, upon probable grounds, that the construction, establishment, operation, installation, enlargement, extension or alteration of the sewage system may create a nuisance, is not in the public interest or may result in a hazard to the health or safety of any person or impairment of the quality of the natural environment for any use that can be made of it. 1972, c. 106, s. 23, *part*.

Permit

59*a*.—(1) No person shall use or operate a sewage system or any part thereof that has been constructed, installed, established, enlarged, extended or altered after the date this Part comes into force in an area to which this Part is made applicable unless a permit for its use or operation has been issued by the Director and, subject to subsection 3, the Director may issue a permit.

Inspection

(2) Every person who has constructed, installed, established, enlarged, extended or altered a sewage system or any part thereof shall, until a permit under subsection 1 is issued, keep open for inspection or make available for inspection by a provincial officer the sewage system or the part thereof that was constructed, installed, established, enlarged, extended or altered.

Where permit not to be issued

(3) The Director shall not issue a permit under subsection 1 where the construction, installation, establishment, enlargement, extension or alteration of the sewage system or part thereof does not comply with a certificate of approval issued therefor under section 57 or contravenes a provision of this Act or the regulations or, where a certificate of approval required under section 57 has not been issued, he considers, upon probable grounds, that the use or operation of the sewage system or part thereof may create a nuisance, is not

in the public interest or may result in a hazard to the health or safety of any person until the construction, installation, establishment, enlargement, extension or alteration is inspected by a provincial officer and altered as the Director may require in order that the sewage system or part thereof will not, in the opinion of the Director, create a nuisance, be contrary to the public interest or result in a hazard to the health or safety of any person. 1972, c. 106, s. 23, *part*.

Where Director may make order

60.—(1) Where any person,

(*a*) constructs, installs, establishes, enlarges, extends or alters a building or structure referred to in section 57 or a sewage system and a certificate of approval required under section 57 has not been issued;

(*b*) constructs, installs, establishes, enlarges, extends or alters a building or structure referred to in section 57 or a sewage system and does not comply with any of the terms and conditions in a certificate of approval issued under section 57 in respect thereof;

(*c*) does not construct, operate, clean, empty, disinfect or maintain a sewage system in compliance with the standards prescribed in the regulations; or

(*d*) uses or operates a sewage system for which a permit required under section 59*a* has not been issued,

the Director may make such order as he considers necessary in order to lessen or prevent the deposit, addition, emission or discharge of any contaminant into the natural environment. 1972, c. 106, s. 24; 1974, c. 20, s. 20.

Action upon non-compliance with order

(2) When a person to whom an order is directed under subsection 1 fails to comply with the order, the Minister may cause the necessary work to be done and charge such person with the cost thereof which may be recovered with costs in any court of competent jurisdiction. 1971, c. 86, s. 60 (2).

Where licence required

61.—(1) No person shall engage in the business of,

(*a*) constructing on site, installing, repairing, servicing, cleaning or emptying sewage systems; or

(*b*) storing, hauling or disposing of sewage from a sewage system,

without having first obtained a licence issued by the Director.

Application for licence

(2) Subject to subsection 3, an applicant for a licence who,

(*a*) pays the prescribed fee; and

(*b*) meets the requirements of the regulations,

is entitled to be issued such licence by the Director.

Powers of Director

(3) The Director may,

(*a*) refuse to issue or renew a licence; or

(*b*) suspend or revoke a licence,

where the licensee is in contravention of this Act or the regulations or the licensee is in breach of any term or condition of the licence or, where the Director is of the opinion that,

(*c*) the applicant or licensee or, where the applicant or licensee is a corporation, its officers or directors, is or are not competent to carry on the business that would be or is authorized by the licence;

(*d*) the past conduct of the applicant or licensee or, where the applicant or licensee is a corporation, of its officers or directors, affords reasonable grounds for belief that the business that would be or is authorized by the licence will not be carried on in accordance with law;

(*e*) the applicant or licensee does not possess or will not have available all premises, facilities and equipment necessary to carry on the business authorized by the licence in accordance with this Act and the regulations; or

(*f*) the applicant or licensee is not in a position to observe or carry out the provisions of this Act and the regulations.

Idem

(4) The Director may impose, alter or revoke terms and conditions in a licence in order,

(*a*) to restrict the area in which a licensee may operate; and

(*b*) to control the method or place or both of storing, hauling, collecting, transferring and disposing of sewage from a sewage system.

(5) A licence expires twelve months after the date of its issue or renewal. Expiration of licence

(6) A licence is not transferable. 1972, c. 106, s. 25. Not transferable

61*a*.—(1) In this section, "municipality" means the corporation of a metropolitan area, regional area or a district area, a local municipality which is not included in a metropolitan, regional or district area, a county, a local board of a health unit or a local board of health. Interpretation

(2) A municipality and Her Majesty the Queen in right of Ontario, represented by the Minister, may enter into an agreement applicable to the whole or any part or parts of the area under the jurisdiction of the municipality providing for, Minister may enter into agreement with municipality

(*a*) the issuance by the municipality of certificates of approval pursuant to this Part;

(*b*) the issuance by the municipality of permits pursuant to this Part;

(*c*) the making of orders by the municipality pursuant to this Part;

(*d*) the carrying out of inspections respecting sewage systems under this Part that may be necessary or expedient,

(i) for the exercise by the municipality of such powers or duties under this Part as may be specified in the agreement, and

(ii) with respect to such applications under *The Planning Act* for consents under section 29 of that Act or for approvals of plans of subdivision under section 33 of that Act as may be specified in the agreement; or R.S.O. 1970, c. 349

(*e*) the collection and payment or remittance of any fees payable under this Act or the regulations for any inspections that are carried out by the municipality under the agreement,

and any matter incidental thereto, and a municipality that has entered into such an agreement has all such powers as may be necessary to carry out the provisions thereof. 1973, c. 94, s. 6, *part*.

Where municipal officer may act

(3) Where the Minister and a municipality have entered into an agreement pursuant to this section, the municipality or the officer or employee of the municipality designated in the agreement shall be deemed to be the Director for the purpose of carrying out the provisions of this Act and the regulations applicable to the matters dealt with in the agreement. 1973, c. 94, s. 6, *part*; 1974, c. 20, s. 21.

Where fee payable

R.S.O. 1970, c. 349

61*b*.—(1) Subject to subsection 2, where an application is made for a consent under section 29 of *The Planning Act* or for approval of a plan of subdivision under section 33 of *The Planning Act*, the applicant shall pay a fee at the rate or rates prescribed by the regulations to the Treasurer of Ontario or, where an agreement is made under section 61*a*, to the person specified in the agreement,

(*a*) in the case of an application under section 29 of *The Planning Act*, for each parcel of land in respect of which the application is made; and

(*b*) in the case of an application under section 33 of *The Planning Act*, for each lot on the proposed plan of subdivision.

Exemption

(2) No fee is payable under subsection 1 in respect of,

(*a*) in the case of an application for a consent under section 29 of *The Planning Act*,

(i) a parcel of land more than ten acres in area in respect of which the application is made,

(ii) a parcel of land in respect of which the application is made that is part of the land on which the owner thereof resides and from which he derives his chief source of income by farming, where no person other than the applicant and one or more members of his immediate family are parties to the transaction in respect of which the application is made,

(iii) a parcel of land in respect of which the application is made and for which a sewage works has been approved under section 42 of *The Ontario Water Resources Act* to serve the parcel of land; or

R.S.O. 1970, c. 332

(*b*) in the case of an application under section 33 of *The Planning Act*, R.S.O. 1970, c. 349

(i) any lot that is more than ten acres in area on the proposed plan of subdivision, or

(ii) any lot that the application states will be served by a sewage works that has been approved or in respect of which an application has been or will be made for approval under section 42 of *The Ontario Water Resources Act*,

where the applicant files with the Director an affidavit showing that he is entitled to the benefit of the exemption set out in this subsection. 1973, c. 94, s. 6, *part*.

Certificate of exemption

(3) Where an affidavit is filed under subsection 2 with the Director, the Director shall cause to be prepared a certificate of exemption from the provisions of subsection 1 and cause the certificate to be delivered to the person filing the affidavit. 1973, c. 94, s. 6, *part*; 1974, c. 20, s. 22.

Consent not to be given until fee paid

(4) A consent under section 29 of *The Planning Act* or an approval under section 33 of *The Planning Act* shall not be given before the fees mentioned in subsection 1 have been paid or a certificate has been delivered pursuant to subsection 3.

Interpretation

(5) In this section, "immediate family" means the son, daughter, son-in-law, daughter-in-law, father, mother, grandchild, grandparent, adopted son, adopted daughter, stepson, stepdaughter or a person to whom the owner stands *in loco parentis*.

Recovery

(6) In addition to any other remedy and to any penalty imposed by law, any fee due and payable under this section,

(*a*) to the Treasurer of Ontario, may be recovered with costs by the Minister as a debt due to Her Majesty the Queen in right of Ontario; or

(*b*) to the corporation of a metropolitan, regional or district area, a county or a local municipality, may be recovered with costs by such corporation as a debt due to such corporation,

in a court of competent jurisdiction. 1973, c. 94, s. 6, *part*.

Offences

62. Any person who, in person or through an agent, representative or employee and any such agent, representative or employee who contravenes any provision of this Part or the regulations or any order or fails to comply with any term or condition of a certificate of approval or licence issued under this Part is guilty of an offence and on summary conviction is liable to a fine of not more than $1,000. 1971, c. 86, s. 62; 1972, c. 106, s. 26.

PART VIII

LITTER

Interpretation

63. In this Part, "litter" includes any material left or abandoned in a place other than a receptacle or place intended or approved for receiving such material and "littering" has a corresponding meaning. 1971, c. 86, s. 63.

Powers of Minister

64. The Minister, for the purposes of the administration and enforcement of this Part and the regulations, may conduct research and studies in the reprocessing, reusing or degradability of packaging or containers and in the management and disposal of litter. 1971, c. 86, s. 64.

Littering prohibited

65. No person shall abandon any material in a place, manner, receptacle or wrapping such that it is reasonably likely that the material will become litter. 1971, c. 86, s. 65.

Subsidies and grants

66. The Minister may make grants to persons to assist in the provision of receptacles to receive litter in such amounts and upon such terms and conditions as the regulations may prescribe. 1971, c. 86, s. 66.

Use or sale of packaging contrary to regulations

67. No person shall use, offer or expose for sale or sell, for use in Ontario, any packaging, container or material for packaging or containers contrary to this Act or the regulations. 1971, c. 86, s. 67.

Offences

68. Any person, whether acting personally or through an agent, representative or employee, and any such agent, representative or employee who contravenes any provision of this Part or the regulations is guilty of an offence and on summary conviction is liable on first conviction to a fine of not more than $100 and on each subsequent conviction to a fine of not more than $1,000. 1971, c. 86, s. 68.

PART IX

CONTROL ORDERS AND STOP ORDERS

69. REPEALED: 1974, c. 20, s. 23.

Control orders

70. The Director may, where he is authorized by this Act to issue an order known as a "control order", order the person to whom it is directed to do any one or more of the following, namely,

(*a*) to limit or control the rate of addition, emission or discharge of the contaminant into the natural environment in accordance with the directions set out in the order;

(*b*) to stop the addition, emission or discharge of the contaminant into the natural environment,

(i) permanently,

(ii) for a specified period, or

(iii) in the circumstances set out in the order;

(*c*) to comply with any directions set out in the order relating to the manner in which the contaminant may be added, emitted or discharged into the natural environment;

(*d*) to comply with any directions set out in the order relating to the procedures to be followed in the control or elimination of the addition, emission or discharge of the contaminant into the natural environment; and

(*e*) to install, replace or alter any equipment or thing designed to control or eliminate the addition, emission or discharge of the contaminant into the natural environment. 1971, c. 86, s. 70.

Compliance with control order

71. Subject to section 79, when a copy of a control order is served upon the person to whom it is directed, that person,

(*a*) shall comply with the order forthwith; or

(*b*) shall, if the order sets out a future date by which it is to be complied with, comply with the order on or not later than such future date. 1971, c. 86, s. 71.

Further order

72. The Director may, by a further order, amend, vary or revoke a control order made under this Act and in each case shall cause a copy of the order to be served on the person to whom the order so amended, replaced or revoked was directed. 1971, c. 86, s. 72.

Where Director proposes to issue control order

73.—(1) Where the Director proposes to issue a control order, he shall serve notice of his intention, together with written reasons therefor and a copy of the report of the provincial officer or other person designated under this Act upon which the reasons are based, and shall not issue the control order until fifteen days after the service thereof.

Submissions to Director

(2) The person to whom the Director intends to issue the control order may make submissions to the Director at any time before the control order is issued. 1971, c. 86, s. 73.

Content of stop order

74. The Director may, where he is authorized by this Act to issue an order known as a "stop order", order the person to whom it is directed to immediately stop or cause the source of contaminant to stop adding to, emitting or discharging into the natural environment any contaminant either permanently or for a specific period of time. 1971, c. 86, s. 74.

Form of stop order

75. A stop order shall be in writing and shall include written reasons for the order. 1971, c. 86, s. 75.

Compliance with stop order

76.—(1) When a copy of a stop order is served upon the person to whom it is directed, that person shall comply with the order immediately.

Revocation of stop order

(2) The Director may by a further order revoke a stop order and in such case shall cause a copy of the order to be served on the person to whom the stop order was directed. 1971, c. 86, s. 76.

PART X

APPEAL BOARD

Pollution Control Appeal Board established

77.—(1) The Board known as the Pollution Control Appeal Board is continued as the Environmental Appeal Board and shall consist of not fewer than five persons appointed by the Lieutenant Governor in Council, who shall hold office during pleasure and none of whom shall be members of the public service in the employ of the Department. 1971, c. 86, s. 77 (1); 1972, c. 1, s. 69 (4).

Chairman and vice-chairman

(2) The Lieutenant Governor in Council may appoint one of the members of the Appeal Board as chairman and another of the members as vice-chairman.

Quorum

(3) Three members of the Appeal Board constitute a quorum.

Remuneration

(4) The members of the Appeal Board shall be paid such remuneration and expenses as the Lieutenant Governor in Council from time to time determines. 1971, c. 86, s. 77 (2-4).

One member may conduct hearing

(5) The chairman may authorize one member of the Board to conduct a hearing by the Board and such member has all the powers of the Board for the purpose of such hearing.

Report

(6) The report of such member may be adopted as the decision of the Board by two other members of the Board, one of whom shall be the chairman or vice-chairman or may be otherwise dealt with as the Board considers proper.

Appointment of staff

(7) Such employees as are required for the purposes of the Board may be appointed under *The Public Service Act*. 1972, c. 1, s. 69 (5). R.S.O. 1970, c. 386

77*a*. REPEALED: 1974, c. 20, s. 24.

When Director refuses approval, etc.

78.—(1) When the Director,

(*a*) refuses to give his approval of plans and specifications;

(*b*) requires a condition precedent to the giving of his approval;

(*c*) refuses to issue a certificate of approval or a provisional certificate of approval;

(*d*) refuses to renew a certificate of approval or a provisional certificate of approval; or

(*e*) suspends or revokes a certificate of approval or a provisional certificate of approval,

he shall serve notice upon the applicant or holder, as the case may be, together with written reasons therefor, and the applicant or holder may, by written notice served upon the Director and the Board within fifteen days after the service of the notice, require a hearing by the Board. 1971, c. 86, s. 78 (1).

When Director refuses licence or permit

(2) When the Director,

(*a*) refuses to issue or renew or cancels or suspends a licence or permit;

(*b*) imposes terms and conditions in issuing a licence or permit or certificate of approval or provisional certificate of approval; or

(*c*) alters the terms and conditions of a certificate of approval, provisional certificate of approval, a licence or permit after it is issued,

the Director shall serve notice together with written reasons therefor upon the applicant or the person to whom the licence or permit or certificate of approval or provisional certificate of approval is issued, as the case may be, and the applicant or person may, by written notice served upon the Director and the Board within fifteen days after the service of the notice, require a hearing by the Board. 1971, c. 86, s. 78 (2); 1972, c. 106, s. 28.

Appeal of order

79.—(1) A person to whom an order of the Director is directed may, by written notice served upon the Director and the Board within fifteen days after service upon him of a copy of the order, require a hearing by the Board. 1971, c. 86, s. 79 (1).

Enforcement of order

(2) No imposition or alteration of terms and conditions, suspension or revocation, refusal to renew or order, except a stop order, and a refusal to renew, suspension or revocation under section 52*c*, shall be enforced until final disposition of an appeal, if any, or until the time for taking an appeal against the order has passed. 1971, c. 86, s. 79 (2); 1972, c. 106, s. 29.

Powers of Board

80.—(1) A hearing by the Board shall be a hearing *de novo* and the Board may confirm, alter or revoke the order, refusal or requirement that is the subject of the hearing.

Appeal to county court

(2) A party to a hearing before the Board may, within thirty days after receipt of the decision of the Board, appeal on a question of law to the county court of the county or district in which is located the source of contaminant, waste disposal site or waste management system which gives rise to the hearing before the Board.

Appeal to Minister

(3) A party to a hearing before the Board may, within thirty days after receipt of the decision of the Board or within thirty days after final disposition of an appeal, if any,

under subsection 2, appeal in writing to the Minister on any matter other than a question of law and the Minister shall confirm, alter or revoke the decision of the Board as to the matter in appeal as he considers in the public interest. 1971, c. 86, s. 80.

Parties to hearing

81. The person requiring the hearing, the Director and any other person specified by the Board are parties to the hearing. 1971, c. 86, s. 81.

PART XI

PROVINCIAL OFFICERS

Designation of provincial officers

82. The Minister may designate in writing one or more officers or employees of the Ministry or other persons as provincial officers for the purposes of any section or Part of this Act or any regulation or section of any regulation relating thereto. 1973, c. 94, s. 7.

Survey by provincial officer

83.—(1) A provincial officer may survey from time to time anything that he has reason to believe is or may be a source of contaminant, and after completing such survey shall report his findings and his recommendations.

Report to be sent to Department and person responsible

(2) The provincial officer shall file his report of his findings and recommendations with the Department and shall serve upon the person responsible for the source of contaminant a copy thereof. 1971, c. 86, s. 83.

Powers of provincial officer

84.—(1) For the purpose of the administration of this Act and the regulations, a provincial officer may, from time to time and upon production of his designation, enter at any reasonable time any building, structure, machine, vehicle, land, water or air and make or require to be made such surveys, examinations, investigations, tests and inquiries, including examinations of books, records and documents, as he considers necessary, and may make, take and remove or may require to be made, taken or removed samples, copies or extracts. 1973, c. 94, s. 8, *part*; 1974, c. 20, s. 25.

Order authorizing

(2) Where a provincial judge is satisfied, upon an *ex parte* application by a provincial officer, that there is reasonable ground for believing that it is necessary to enter any building, structure, machine, vehicle, land, water or air for the administration of this Act or the regulations, the provincial judge may issue an order authorizing a provincial officer to enter therein or thereon and to make or require to be made such surveys, examinations, investigations, tests and inquiries and to take the other actions mentioned in subsection

1 but every such entry, survey, examination, investigation, test, inquiry and other such action shall be made or taken between sunrise and sunset unless the provincial judge authorizes the provincial officer, by the order, to so act at another time. 1973, c. 94, s. 8.

Information

(3) Every person responsible for a source of contaminant shall furnish such information as a provincial officer requires for the purposes of this Act or the regulations. 1971, c. 86, s. 84 (3).

Calling for assistance of member of police force

85.—(1) Whenever a provincial officer is required or empowered by this Act or the regulations to do or direct the doing of anything, such provincial officer may take such steps and employ such assistance as is necessary to accomplish what is required, and may, when obstructed in so doing, call for the assistance of any member of the Ontario Provincial Police Force or the police force in the area where the assistance is required and it is the duty of every member of a police force to render such assistance. 1971, c. 86, s. 85.

Inspection of motor vehicles

(2) A provincial officer, for the purpose of carrying out the provisions of this Act and the regulations, may require the driver of any motor vehicle to stop and may inspect the motor vehicle and require the driver of the motor vehicle to submit the motor vehicle, together with its equipment and any trailer attached thereto, to such examinations and tests at such place or places and time or times as the provincial officer considers expedient and where the provincial officer considers it necessary or expedient he may call for the assistance of any member of the Ontario Provincial Police Force or the police force in the area where the assistance is required and it is the duty of every member of a police force to render such assistance.

Duty of driver of motor vehicle

(3) Every driver of a motor vehicle shall stop or submit the motor vehicle, together with its equipment and any trailer attached, to such examinations and tests as may be required by a provincial officer or a member of a police force referred to in subsection 2. 1973, c. 94, s. 9.

Obstruction of provincial officer

86. No person shall hinder or obstruct a provincial officer in the lawful performance of his duties or furnish a provincial officer with false information or refuse to furnish him with information required for the purposes of this Act and the regulations. 1973, c. 94, s. 10.

Matters confidential

87.—(1) Except as to information in respect of the deposit, addition, emission or discharge of a contaminant into the natural environment, every provincial officer shall preserve secrecy in respect of all matters that come to his knowledge

in the course of any survey, examination, test or inquiry under this Act or the regulations and shall not communicate any such matters to any person except,

(*a*) as may be required in connection with the administration of this Act and the regulations or any proceedings under this Act or the regulations;

(*b*) to his counsel; or

(*c*) with the consent of the person to whom the information relates.

Testimony in civil suit

(2) Except in a proceeding under this Act or the regulations, no provincial officer shall be required to give testimony, other than testimony in respect of the deposit, addition, emission or discharge of a contaminant into the natural environment, in any civil suit or proceeding with regard to information obtained by him in the course of any survey, examination, test or inquiry under this Act or the regulations. 1971, c. 86, s. 87.

PART XII

ENVIRONMENTAL COUNCIL

Interpretation

88. In this Part, "Council" means the Environmental Council. 1971, c. 86, s. 88.

Environmental Council established

89.—(1) A council to be known as the Environmental Council may be established and shall consist of not fewer than seven and not more than eleven persons appointed by the Lieutenant Governor in Council, each to hold office for a term of not more than three years.

Chairman and vice-chairman

(2) The Lieutenant Governor in Council may appoint one of the members of the Council as chairman and another of the members as vice-chairman.

Members

(3) The composition of the Council shall be such as to provide for competent and knowledgeable persons in matters relating to the natural environment.

Vacancies

(4) Vacancies in the membership of the Council may be filled by the Lieutenant Governor in Council.

Remuneration

(5) The members of the Council shall be paid such remuneration and expenses as the Lieutenant Governor in Council from time to time may determine. 1971, c. 86, s. 89.

Duties of Council

90. The Council, through its chairman, shall,

(*a*) advise the Minister as to the results of current research related to,

(i) pollution, and

(ii) the natural environment; and

(*b*) consider any matter affecting the quality of the environment which the Council or the Minister deems advisable and advise the Minister thereon through its chairman. 1971, c. 86, s. 90.

PART XIII

MISCELLANEOUS

91. REPEALED: 1974, c. 20, s. 26.

Where contaminant causes damage to crops or live stock

92.—(1) Where a person complains that a contaminant is causing or has caused injury or damage to live stock or to crops, trees or other vegetation which may result in economic loss to such person, he may, within fourteen days after the injury or damage becomes apparent, request the Minister to conduct an investigation.

Request for investigation

(2) Upon receipt of a request, the Minister may cause an investigation to be made and a report prepared of the findings of the investigation.

Report of investigation

(3) A copy of the report shall be given to the claimant and to the person responsible for the source of contaminant alleged to be the cause of the injury or damage.

Right of person responsible to view damage, etc.

(4) The claimant shall permit the person responsible for such source of contaminant or his agent to view the injury or damage and to remove samples and conduct tests and examinations as may be reasonably necessary to establish the cause of the injury or damage.

Board of negotiation

(5) A board of negotiation shall be established consisting of two or more members appointed by the Lieutenant Governor in Council, one of whom may be designated as chairman.

Quorum

(6) Any two members of the board of negotiation constitutes a quorum and are sufficient to perform all the functions of the board on behalf of the board.

(7) The board of negotiation may sit at any place in Ontario. Place of sitting

(8) If a complainant who has requested an investigation under subsection 1 desires to have his claim for injury or damage negotiated by the board of negotiation, he shall notify the Minister and the person responsible for the source of contaminant alleged to be the cause of the injury or damage of the amount of his claim within a reasonable time after the amount can be determined. Notice of amount of claim

(9) If the claimant and the person responsible are not able to settle the claim within thirty days after notice of the claim is given to the Minister under subsection 8, the claimant or the person responsible may serve notice of negotiation upon the other of them and upon the board of negotiation stating that he requires a settlement of the claim to be negotiated by the board of negotiation. Notice of negotiation

(10) Upon receipt of a notice of negotiation, the board of negotiation shall assess the injury or damage in respect of which the claim is made and, upon reasonable notice to the claimant and to the person responsible, shall meet with them and, without prejudice to any subsequent proceedings, proceed in a summary and informal manner to negotiate a settlement of the claim. 1971, c. 86, s. 92. Negotiation proceedings

93. Any consent, notice, licence, permit, approval, order or certificate purporting to be signed by the Director or the Minister or by such officer of the Department as is designated in the regulations, or any certified copy, is receivable in evidence in any action, prosecution or other proceeding as *prima facie* proof of the facts set out therein without proof of the signature or the official position of the person appearing to have signed it. 1971, c. 86, s. 93. Consents, notices, etc., as evidence

94.—(1) The Lieutenant Governor in Council may make regulations, Regulations

(*a*) classifying contaminants and sources of contaminants and exempting any classes from the provisions of this Act and the regulations;

(*b*) prohibiting or regulating and controlling the depositing, addition, emission or discharge of any contaminant or contaminants into the natural environment from any source of contaminant or any class thereof;

(*c*) prescribing maximum permissible amounts, concentrations or levels of any contaminant or combination of contaminants and any class of either of them;

(*d*) prescribing methods or standards, or both, for determining the amount, concentration or level of any contaminant, combination of contaminants or any class of either of them;

(*e*) defining the desirable quality criteria of the natural environment;

(*f*) classifying persons for the purposes of this Act and exempting any class from any provision thereof;

(*g*) classifying plants, structures and things, prescribing classes thereof that shall not be constructed, altered or modified unless the plans and specifications thereof are approved by the Director, and prescribing classes thereof for which the approval of the Director as to the plans and specifications is not required;

(*h*) prescribing the details that shall be set out in plans and specifications submitted to the Director for approval;

(*i*) prescribing the amounts of grants and loans and the terms and conditions of such grants and loans;

. . . . . .

1967, c. 2

(*k*) amending or revoking in whole or in part the regulations made under *The Air Pollution Control Act, 1967*;

(*l*) prescribing the maximum permissible concentration or level in water of any contaminant either generally or with respect to any part of the water of Ontario specified in the regulations;

(*m*) prescribing methods for determining the concentration or level in water of any contaminant, either generally or with respect to any part of the water of Ontario specified in the regulations, for the purposes of the regulations;

(*n*) prescribing maximum permissible changes in temperatures of water, either generally or with respect to any part of the water of Ontario specified in the regulations;

(*o*) prescribing fees that may be charged and collected by the Department for copies of documents, maps, plans and drawings supplied by the Department;

(*p*) regulating the quality of fuels that may be used for heating, generating steam or electricity, for industrial processes or for incineration. 1971, c. 86, s. 94 (1); 1972, c. 106, s. 31 (1); 1973, c. 94, s. 11 (1).

Regulations relating to Part III

(2) The Lieutenant Governor in Council may make regulations relating to Part III,

(*a*) classifying motors and motor vehicles for the purpose of any regulation and exempting any class or type of motor or motor vehicle from any regulation;

(*b*) regulating or prohibiting the operation in all or any part of Ontario of any class or type of motor or motor vehicle in order to lessen or prevent the emission of any pollutant into the natural environment;

(*c*) requiring motors or motor vehicles or any class or type of motor or motor vehicle to have installed thereon or incorporated therein one or more systems or devices to prevent or lessen the emission of any contaminant into the natural environment, prescribing the standards and specifications of any such system or device, prescribing the standards of emission of any contaminant into the natural environment with which any such system or device shall comply and providing for testing and inspection of any such system or device;

(*d*) prescribing the standards of emission into the natural environment of any contaminant by any motor or motor vehicle or any class or type of motor or motor vehicle and providing for the testing and inspection of any such motor, motor vehicle, class or type;

(*e*) regulating the quality of motor fuels and additives used or intended for use in motor fuels in Ontario. 1971, c. 86, s. 94 (2).

Regulations relating to Part IV

(3) The Lieutenant Governor in Council may make regulations relating to Part IV,

(*a*) requiring and regulating the storage, treatment and disposal of sewage in boats and ships or any class or classes thereof and the equipment therefor, and

prohibiting the use and installation of equipment for the storage, treatment or disposal of sewage in boats and ships or any class or classes thereof unless the equipment and installation thereof conform to the regulations, and providing for and requiring the approval of the Director for any such equipment, and prohibiting and regulating the discharge of sewage from such boats and ships or any class or classes thereof;

(*b*) regulating and controlling, for the purpose of preventing or reducing the pollution of any water, places or any class or classes thereof located on or adjacent to any water where moorings are provided for boats or ships or where any services are provided for boats or ships or the occupants thereof, and regulating and governing persons providing such moorings or services, or any class or classes thereof;

(*c*) defining sewage for the purposes of regulations made under clauses *a* and *b*;

(*d*) prescribing forms and providing for their use for the purposes of Part IV;

(*e*) providing for the issue of permits and identification plates for ice shelters and requiring and governing their use;

(*f*) regulating the placing, construction and standard of repair of ice shelters and requiring and regulating the storage, treatment and disposal of waste and requiring the approval of the Director for any equipment and things related thereto by any person or class of persons and prohibiting the placing, allowing to remain or use of an ice shelter contrary to or in a condition that is contrary to the regulations or without any equipment or facilities required by the regulations;

(*g*) prescribing the dates within which ice shelters may be placed, allowed to remain or used on or over the ice over any water. 1971, c. 86, s. 94 (3); 1973, c. 94, s. 11 (2).

Regulations relating to Part V

(4) The Lieutenant Governor in Council may make regulations relating to Part V,

(*a*) designating wastes in addition to those specified in clause *d* of section 28, and exempting any wastes

from this Part and the regulations or any provision thereof, and prescribing terms and conditions for such exemption;

(*b*) classifying waste management systems and waste disposal sites, and exempting any class thereof from this Part or the regulations or any provision thereof, and prescribing terms and conditions for such exemption;

(*c*) providing for the issue of certificates of approval and provisional certificates of approval for waste management systems or waste disposal sites, or any class thereof;

(*d*) governing and regulating the management of waste and prescribing standards for waste management systems and for the location, maintenance and operation of waste disposal sites, or any class thereof;

(*e*) governing the location of waste disposal sites and designating parts of Ontario in which no waste disposal sites, or any class thereof, shall be established or operated;

(*f*) prescribing the amounts and conditions of deposits and bonds and sureties for the purpose of section 34, and prescribing the terms and conditions upon which deposits may be returned under section 36;

(*g*) prescribing the records that shall be kept by operators of waste management systems and waste disposal sites and the reports that shall be made by such operators;

(*h*) prescribing the form of application and the procedure to be followed in applying for any compensation under this Part;

(*i*) amending or revoking in whole or in part the regulations made under *The Waste Management Act, 1970*; 1970, c. 44

(*j*) prescribing the rates of the fees for the disposal of any type of waste in a well that is a waste disposal site that shall be paid into The Waste Well Disposal Security Fund. 1971, c. 86, s. 94 (4); 1972, c. 106, s. 31 (2, 3).

(5) REPEALED: 1973, c. 94, s. 11 (3).

Regulations relating to Part VII

(6) The Lieutenant Governor in Council may make regulations relating to Part VII,

(*a*) prescribing standards for the construction, operation and maintenance of sewage systems;

(*b*) prescribing standards, methods and equipment for the cleaning, disinfecting and emptying of sewage systems;

(*c*) classifying sewage systems and exempting any class thereof from Part VII or the regulations or any provision thereof and prescribing terms and conditions for such exemptions;

(*d*) prescribing fees for certificates of approval and permits for the use or operation of sewage systems or any class or classes thereof;

(*e*) governing the location of sewage systems;

(*f*) designating areas in which any class of sewage system may not be established or operated;

(*g*) prescribing classes of licence holders and exempting any class from any provision of Part VII or any regulation made under this subsection, and attaching conditions to any such exemption;

(*h*) prescribing the qualification of licence holders, providing for the examination of applicants for licences and prescribing the fees for such examinations;

(*i*) providing for the issue and renewal of licences and the fees therefor;

(*j*) prescribing the records to be kept and the returns to be made by persons to whom a licence has been granted;

(*k*) prescribing fees or rates of fees payable and the procedure for payment under section 61*b*;

(*l*) prescribing qualifications of inspectors, providing for their classification, examination and certification, prescribing fees for such examination and certification and providing for the terms upon which such certification may be suspended or cancelled and prohibiting any municipality from carrying out any inspections under an agreement under Part VII except by certified inspectors;

(*m*) exempting any parcel or class of parcels of land in respect of which an application for a consent is made under section 29 of *The Planning Act* from the payment of a fee under section 61*b*. 1971, c. 86, s. 94 (6); 1972, c. 106, s. 31 (11, 12); 1973, c. 94, s. 11 (4). R.S.O. 1970, c. 349

Regulations relating to Part VIII

(7) The Lieutenant Governor in Council may make regulations relating to Part VIII,

(*a*) classifying packaging and containers and exempting any class thereof from any provision of this Part or the regulations;

(*b*) requiring payment of a deposit at the time of purchase of any material packaged or contained in any class of packaging or container and regulating the amount, terms and conditions of deposits;

(*c*) designating classes of packaging and containers as returnable and designating the persons to whom such returns may be made;

(*d*) regulating the amount to be paid for the return of any class of packaging or container and the amount, terms and conditions of such payment;

(*e*) classifying containers, packaging and materials or any combination of materials used as packaging or containers and regulating or prohibiting the use or sale for use in Ontario of any class thereof;

(*f*) governing the material of the packaging or containers in any class of packaging or containers used or sold for use in Ontario;

(*g*) requiring and governing the placing of receptacles to receive litter and governing the capacity, design and construction of such receptacles;

(*h*) prescribing the amounts of grants to persons to assist in the provision of receptacles to receive litter, and the terms and conditions of such grants. 1971, c. 86, s. 94 (7); 1972, c. 106, s. 31 (13).

Scope of regulations

95.—(1) Any regulation may be general or particular in its application and may be limited as to time or place or both.

Adoption of codes in regulations

(2) Any regulation may adopt by reference, in whole or in part, with such changes as the Lieutenant Governor in

Council considers necessary, any code, formula, standard or procedure, and may require compliance with any code, standard or procedure so adopted. 1971, c. 86, s. 95.

Conflict

96. Where a conflict appears between any provision of this Act or the regulations and any other Act or regulation in a matter related to the natural environment or a matter specifically dealt with in this Act or the regulations, the provision of this Act or the regulations shall prevail. 1971, c. 86, s. 96.

Protection from personal liability

96*a*.—(1) Except in the case of an application for judicial review or an action or proceeding that is specifically provided for with respect to a person referred to in this subsection in any Act or in a regulation under this or any other Act, no action or other proceeding for damages or otherwise shall be instituted against an employee of the Ministry, a member of the Board or of the Hearing Board or a Crown employee within the meaning of *The Public Service Act* who is a provincial officer or is acting under the direction of an employee of the Ministry, or such member or provincial officer for any act done in good faith in the execution or intended execution of any duty or authority under this Act or for any alleged neglect or default in the execution in good faith of any such duty or authority.

R.S.O. 1970, c. 386

Crown not relieved of liability

R.S.O. 1970, c. 365

(2) Subsection 1 does not, by reason of subsections 2 and 4 of section 5 of *The Proceedings Against the Crown Act*, relieve the Crown of liability in respect of a tort committed by an agent or servant of the Crown to which it would otherwise be subject and the Crown is liable under that Act for any such tort in a like manner as if subsection 1 had not been enacted. 1974, c. 20, s. 27.

Certificate of analysis as evidence

97. In any prosecution, proceeding or hearing under this Act or the regulations, the production of a certificate or report of an analyst of the Department as to the analysis, description, ingredients, quality, quantity or temperature of any material, whether solid, liquid or gas, or any combination of them, is *prima facie* evidence of the facts stated therein and of the authority of the person making the certificate or report without any proof of appointment or signature. 1971, c. 86, s. 97.

Service

98.—(1) Any notice, decision or other document required to be given or served under this Act or the regulations is sufficiently given or served if delivered personally or sent by registered mail addressed to the person to whom delivery or service is required to be made at the latest address for service appearing on the records of the Department.

When service deemed made

(2) Where service is made by registered mail, the service shall be deemed to be made on the fifth day after the day of mailing unless the person on whom service is being made establishes that he did not, acting in good faith, through absence, accident, illness or other cause beyond his control receive the notice or order until a later date. 1971, c. 86, s. 98.

Enforcing performance of things required to be done

99. Where the Minister or the Director has authority to order or require that any matter or thing be done, the Minister may order that, in default of its being done by the person ordered or required to do it, such matter or thing shall be done at the expense of such person, and the Minister may recover the cost of doing it, with costs, by action in a court of competent jurisdiction as a debt due to the Crown by such person. 1971, c. 86, s. 99.

Power to restrain by action

100. Where any provision of this Act or the regulations or any direction, order, approval, notice or permit, made, granted, given, served or issued by the Minister or the Director under this Act is contravened, in addition to any other remedy and to any penalty imposed by law, such contravention may be restrained by action at the instance of the Minister. 1971, c. 86, s. 100.

False information

101. No person shall knowingly give false information in any application, return or statement made to the Minister, a provincial officer or any employee of the Ministry in respect of any matter under this Act or the regulations. 1974, c. 20, s. 28.

Offence

102.—(1) Except as otherwise provided in this Act, every person, whether as principal or agent, or an employee of either of them, who contravenes any provision of this Act or the regulations or fails to comply with an order or any term or condition of a certificate of approval or a licence made or issued under this Act is guilty of an offence and on summary conviction is liable on a first conviction to a fine of not more than $5,000 and on each subsequent conviction to a fine of not more than $10,000 for every day or part thereof upon which such offence occurs or continues. 1971, c. 86, s. 102 (1); 1972, c. 106, s. 32.

Exception when order or program approval complied with

(2) Notwithstanding subsection 1, a person to whom an order or program approval of the Minister or the Director is directed who complies fully with the order or approval shall not be prosecuted for or convicted of an offence in respect of the matter or matters dealt with in the order or approval that occurs during the period within which the order or program approval is applicable. 1971, c. 86, s. 102 (2); 1973, c. 94, s. 12.

Application of Part VII

103. Part VII of this Act applies in such areas in Ontario as are designated by the Lieutenant Governor by his proclamation. 1971, c. 86, s. 103; 1972, c. 106, s. 33.

Repeal R.S.O. 1970, cc. 16, 491

104. *The Air Pollution Control Act* and *The Waste Management Act* are repealed. 1971, c. 86, s. 104.

REGULATION 15

under The Environmental Protection Act, 1971

as amended by

O. Reg. 873/74

GENERAL

INTERPRETATION

1. In this Regulation,

(*a*) "air pollution episode" means an occasion when air contamination is at such a level and for such a period of time that the air contamination may become the cause of increased human sickness and mortality;

(*b*) "air pollution index" means a series of numbers expressing the relative levels of air pollution and taking into consideration one or more air contaminants;

. . . . . .

(*d*) "equipment" includes apparatus, device, mechanism or structure;

(*e*) "fuel burning equipment" includes equipment designed to burn fuel but does not include an internal combustion engine;

(*ea*) "highway" means highway as defined in subsection 1 of section 1 of *The Highway Traffic Act*;

(*f*) "incinerator" includes equipment used for the burning of waste;

(*g*) "opacity" means,

(i) the color of a visible emission in shades of grey to black, or

(ii) the degree to which a visible emission obstructs the passage of light;

(*h*) "point of emission" means the point at which a contaminant enters the natural environment;

(*i*) "visible emission" means any contaminant which can be detected by the naked eye. R.R.O. 1970, Reg. 15, s. 1; O. Reg. 873/74, s. 1.

APPLICATION

2. The Act and this Regulation apply to all areas within Ontario. R.R.O. 1970, Reg. 15, s. 2.

EXEMPTIONS

3. The following sources of contaminant are classes for which the approval of the Director as to the plans and specifications is not required under section 8 of the Act:

1. Fuel burning equipment used for the purpose of comfort heating in a building using natural gas or No. 2 oil at a rate of less than 1.5 million British Thermal Units per hour.

2. Equipment for the preparation of food in a domestic residence.

3. Fuel burning equipment used solely for the purpose of comfort heating in a dwelling used for the housing of not more than three families.

4. Equipment for construction or maintenance of a highway while the equipment is being used on the highway. O. Reg. 873/74, s. 2.

AIR POLLUTION INDEX

4.—(1) The Department may prepare an index to be known as the "Air Pollution Index" for any area in Ontario, from time to time.

(2) Where the air pollution index for an area indicates increasing air pollution that may lead to an air pollution episode, the Minister, in consultation with the Minister of Health, may order curtailment of the operation of sources of air pollution in the manner described in subsections 3 and 4.

(3) Where the air pollution index reaches the number 32, designated as Air Advisory Level, and meteorological forecasts indicate a six hour prolongation of atmospheric conditions conducive to sustained or increased air pollution levels, the Minister may require owners or operators of sources of air pollution to make preparation for the curtailment of such operations as are specified by the Minister.

(4) Where the air pollution index reaches the number 50, designated as First Air Pollution Alert, and meteorological forecasts indicate a six hour prolongation of atmospheric conditions conducive to sustained or increased air pollution levels, the Minister may require owners or operators of sources of air pollution to curtail such operations as are specified by the Minister. R.R.O. 1970, Reg. 15, s. 4.

5.—(1) The maximum concentration of a contaminant set out in Column 1 of Schedule 1 at a point of impingement from a source of contaminant, other than a motor vehicle, shall not be greater than the concentration set out opposite thereto in Column 3 of Schedule 1, expressed in the unit of concentration set out opposite thereto in Column 2 of Schedule 1.

(2) The concentration of a contaminant at a point of impingement may be calculated in accordance with the Appendix.

(3) No person shall cause or permit the concentration of a contaminant at a point of impingement to exceed the standard prescribed in Schedule 1. O. Reg. 873/74, s. 3, *part*.

6. No person shall cause or permit to be caused the emission of any air contaminant to such extent or degree as may,

(*a*) cause discomfort to persons;

(*b*) cause loss of enjoyment of normal use of property;

(*c*) interfere with normal conduct of business; or

(*d*) cause damage to property. R.R.O. 1970, Reg. 15, s. 6.

7.—(1) The Ministry shall prepare a chart to be known as the "Visible Emission Chart of the Province of Ontario".

(2) The Visible Emission Chart of the Province of Ontario shall consist of two one-inch squares on a white background such that,

(*a*) the area within the square designated as number 1 shall have black dots or lines evenly spaced such that approximately twenty per cent of the area is black;

(*b*) the area within the square designated as number 2 shall have black dots or lines evenly spaced such that approximately forty per cent of the area is black.

(3) For the purpose of enforcing the Act and this Regulation no person other than a provincial officer who has been trained by the Ministry in the identification of opacity shall determine the opacity of a visible emission. O. Reg. 873/74, s. 3, *part*.

8.—(1) Subject to subsection 2, no person shall cause or permit to be caused a visible emission,

(*a*) having shades of grey darker than number 1 on the Visible Emission Chart of the Province of Ontario at the point of emission; or

(*b*) that obstructs the passage of light to a degree greater than twenty per cent at the point of emission.

(2) A visible emission from a source of combustion employing solid fuel may,

(*a*) be in shades of grey darker than number 1, but not darker than number 2 on the Visible Emission Chart of the Province of Ontario at the point of emission; or

(*b*) obstruct the passage of light to a degree greater than 20 per cent but no greater than 40 per cent at the point of emission,

for a period of not more than four minutes in the aggregate in any thirty-minute period. O. Reg. 873/74, s. 3, *part*.

9. Where at any stationary source of air pollution a failure to operate in the normal manner or a change in operating conditions occurs, or a shut-down of the source or part thereof is made for some purpose, resulting in the emission of air contaminants that may result in quantities or concentrations in excess of those allowed in sections 5, 6 and 8,

(*a*) the owner or operator of the source of air pollution shall,

(i) immediately notify a provincial officer and furnish him with particulars of such failure, change or shut-down, and

(ii) furnish the provincial officer with the particulars in writing, as soon as is practicable, of such failure, change or shut-down; and

(*b*) the provincial officer, where he considers it advisable, may authorize, in writing, the continuance of such operation for such period of time as he considers reasonable in the circumstances and may impose upon the owner or operator such terms and conditions for such continued operation as he considers necessary in the circumstances. R.R.O. 1970, Reg. 15, s. 9.

10.—(1) No person shall burn or permit to be burned in any fuel burning equipment or incinerator any fuel or waste except the fuel or waste for the burning of which the equipment or incinerator was designed.

(2) No person shall burn or permit to be burned in any fuel burning equipment or incinerator any fuel or waste at a greater rate than that rate for which the

equipment or incinerator was designed. R.R.O. 1970, Reg. 15, s. 10.

10*a*. Except for heat, sound, vibration or radiation, no person shall,

(*a*) construct, alter, demolish, drill, blast, crush or screen anything or cause or permit the construction, alteration, demolition, drilling, blasting, crushing or screening of anything so that a contaminant is carried beyond the limits of the property on which the construction, alteration, demolition, drilling, blasting, crushing or screening is being carried out; or

(*b*) sandblast or permit the sandblasting of anything so that a contaminant is emitted into the air,

to an extent or degree greater than that which would result if every step necessary to control the emission of the contaminant were implemented. O. Reg. 873/74, s. 4.

11. No person shall operate or permit the operation of,

(*a*) an apartment incinerator, domestic incinerator, multiple chamber incinerator or starved air incinerator burning domestic waste;

(*b*) a multiple chamber incinerator or a starved air incinerator burning solid industrial waste; or

(*c*) an incinerator burning liquid industrial waste, industrial slurries or sludges, sewage sludges or slurries, gaseous waste, organic vapour or fume,

which causes or is likely to cause a concentration in the combustion gases emitted into the natural environment, of organic material having a carbon content, expressed as equivalent methane, greater than fifty parts per million by volume. O. Reg. 873/74, s. 5, *part*.

12. No person shall store, handle or transport any solid, liquid or gaseous material or substance in such manner that an air contaminant is released to the atmosphere. R.R.O. 1970, Reg. 15, s. 12.

13. to **16.** REVOKED: O. Reg. 873/74, s. 5, *part*.

Appendix

1. In this Appendix, wherever the height of a building or structure is referred to, there shall not be included in calculating such height the height of any flagpole, aerial or stack designed for venting emissions.

2. The concentration of a contaminant at a point of impingement shall be calculated as follows:

(*a*) where the point of impingement is located on the building or structure or is within five metres horizontally of the building or structure on which the point of emission is located, and,

(i) the height above grade at the point of emission is less than twice the height of the highest part of the building or structure on which the point of emission is located where the highest part of the building or structure is at a height of not more than twenty metres above grade,
(*see figures 1 and 2*)

(ii) the height of the highest part of the building or structure on which the point of emission is located is greater than twenty metres above grade and the point of emission is less than twenty metres above the highest part of the building or structure on which it is located, or
(*see figure 3*)

(iii) there is a building or structure upwind from the point of emission such that,

a. the height above grade of the building or structure is greater than the height above grade at the point of emission, and

b. the building or structure is a horizontal distance of 100 metres or less from the point of emission,
(*see figures 4 and 5*)

the following formula shall be applied:
(*see notes 1 and 2*)

$$K = \frac{0.6 \times 10^6 \times Q}{L^2}$$

Where: K is the half hour average concentration at the point of impingement in micrograms per cubic metre,

Q is the rate of emission in grams per second of the contaminant,

L is,

(i) where the point of impingement is at the same height or higher above grade than the point of emission, the straight line distance in metres between the point of emission and the point of impingement, or

(ii) where the point of impingement is lower in height above grade than the point of emission, the product of 1.57 and the straight line distance in metres between the point of emission and the point of impingement.

NOTES: 1. Where a building or structure adjacent to the building or structure on which the point of emission is located is within five metres of that building or structure, it shall be treated as being part of the building or structure on which the point of emission is located.

2. Where K yields a value greater than the concentration of the contaminant at the point of emission, the concentration of the contaminant at the point of emission shall be deemed to be the value of K.

(*b*) where the point of impingement is a horizontal distance of five metres or more from the building or structure on which the point of emission is located and,

(i) the height above grade at the point of emission is less than twice the height of the highest part of the building or structure on which the point of emission is located where the highest part of the building or structure is at a height of not more than twenty metres above grade,
(*see figures 6 and 7*)

(ii) the height of the highest part of the building or structure on which the point of emission is located is greater than twenty metres above grade and the point of emission is less than twenty metres above the highest part of the building or structure on which it is located, or
(*see figure 8*)

(iii) there is a building or structure upwind from the point of emission such that,

1. the height above grade of the building or structure is greater than the height above grade at the point of emission, and

2. the building or structure is a horizontal distance of 100 metres or less from the point of emission,
(*see figures 9 and 10*)

the following formula shall be applied:
(*see notes 1 and 3*)

$$K = \frac{10^6 \times Q \times F}{31.4 \times \sigma_y \times \sigma_z} \times \exp\left[-\frac{1}{2}\left(\frac{Y}{\sigma_y}\right)^2\right] \left\{\exp\left[-\frac{1}{2}\left(\frac{Z - H}{\sigma_z}\right)^2\right] + \exp\left[-\frac{1}{2}\left(\frac{Z + H}{\sigma_z}\right)^2\right]\right\}$$

Where: K is the half hour average concentration of the contaminant at the point of impingement in micrograms per cubic metre

Q is the rate of emission in grams per second of the contaminant
(*see note 2*)

exp is the exponential function where e = 2.7183

Y is the perpendicular distance in metres between the point of impingement and a vertical plane parallel to the chosen direction of the wind through the wind-oriented centre of the building or structure on which the point of emission is located
(*see figures 11 and 12*)
(*see notes 4 and 5*)

Z is the difference in height, in metres, between the point of impingement and the ground level at or beneath the point of impingement

H is a function of the height, in metres, above grade of the building or structure on which the point of emission is located

F is a factor related to the atmospheric stability of the air

σ_y is a function which defines the amount of dispersion of the contaminant in a horizontal direction at the point of impingement

σ_z is a function which defines the amount of dispersion of the contaminant in a vertical direction at the point of impingement

Determination of K 1. Two values for K shall be determined using the formula in clause *b*.

2. The maximum value obtained for K shall be applied in this Regulation.

Value number 1 for K is determined as follows:

H is 0.67 times the height, in metres, above grade of the building or structure on which the point of emission is located

F is 0.6

σ_y is determined as follows:

$\sigma'_y = \frac{A}{4.3}$ where A is the greatest width, in metres, presented to the wind by the building or structure on which the point of emission is located, measured horizontally and perpendicularly to the direction of the wind
(*see figure 13*)

where σ'_y is equal to or less than 243.45

$$\text{calculate } X'_y = 6.554\ \sigma'^{1.08172}_y$$

where σ'_y is greater than 243.45

$$\text{calculate } X'_y = 4.524\ \sigma'^{1.14616}_y$$

and calculate

$X_y = G + X'_y$ where G is the horizontal distance, in metres, between the wind-oriented centre of the building or structure on which the point of emission is located and the line where vertical planes, one through the wind-oriented centre of the building or structure on which the point of emission is located and parallel to the chosen direction of the wind, and the other through the point of impingement, meet at right angles.
(*see figure 14*)
(*see note 6*)

where the value of X_y is equal to or less than 2500

$$\text{calculate } \sigma_y = 0.176\ X_y^{0.92445}$$

where the value of X_y is greater than 2500

$$\text{calculate } \sigma_y = 0.268\ X_y^{0.87248}$$

σ_z is determined as follows:

$\sigma'_z = \frac{B}{2.15}$ where B is the height above ground in metres of the highest part of the building or structure on which the point of emission is located.

where $6'_z$ is equal to or less than 141.41

$$\text{calculate } X'_z = 12.027\ 6'^{1.08783}_z$$

where $6'_z$ is greater than 141.41

$$\text{calculate } X'_z = 10.418\ 6'^{1.10419}_z$$

and calculate $X_z = G + X'_z$ where G has the same value for G as used in the equation

$X_y = G + X'_y$

Where the value of X_z is equal to or less than 2500

$$\text{calculate } 6_z = 0.106\ X_z^{0.91926}$$

where X_z is greater than 2500

$$\text{calculate } 6_z = 0.120\ X_z^{0.90564}$$

Value number 2 for K is determined as follows:

Where: H is 0.67 times the height in metres above grade of the building or structure on which the point of emission is located

F is 0.8

6_y is determined as follows:

$6'_y = \frac{A}{4.3}$ where $6'_y$ has the same value as $6'_y$ determined for value number 1 for K

where $6'_y$ is equal to or less than 49.01

$$\text{calculate } X'_Y = 10.686\ 6'^{1.07455}_y$$

where $6'_y$ is greater than 49.01 and less than 409.32

$$\text{calculate } X'_Y = 10.020\ 6'^{1.08889}_y$$

where $6'_y$ is equal to or greater than 409.32

$$\text{calculate } X'_Y = 6.760\ 6'^{1.15556}_y$$

and calculate

$X_y = G + X'_y$ where G has the same value for G determined for value number 1 for K

where the value of X_y is equal to or less than 700

$$\text{calculate } 6_y = 0.110\ X_Y^{0.93062}$$

where X_Y is greater than 700 and less than 7000

$$\text{calculate } 6_y = 0.120\ X_Y^{0.91837}$$

where X_Y is equal to or greater than 7000

$$\text{calculate } 6_y = 0.191\ X_Y^{0.86538}$$

6_z is determined as follows:

$6'_z = \frac{B}{2.15}$ where B is the vertical height above grade of the highest part of the building or structure on which the point of emission is located.

where $6'_z$ is equal to or less than 24.64

$$\text{calculate } X'_Z = 16.524\ 6'^{1.16918}_z$$

where $6'_z$ is greater than 24.64 and less than 110.75

$$\text{calculate } X'_Z = 4.984\ 6'^{1.53965}_z$$

where $6'_z$ is equal to or greater than 110.75

$$\text{calculate } X'_z = 1.090\ 6'^{1.85677}_z$$

and calculate

$X_z = G + X'_z$ where G has the same value for G determined for value number 1 for K

where X_z is equal to or less than 700

$$\text{calculate } 6_z = 0.091\ X_z^{0.8553}$$

where X_z is greater than 700 and less than 7000

$$\text{calculate } 6_z = 0.352\ X_z^{0.6495}$$

where X_z is equal to or greater than 7000

$$\text{calculate } 6_z = 0.955\ X_z^{0.53857}$$

NOTES:

1. Where a building or structure adjacent to the building or structure on which the point of emission is located is within five metres of that building or structure, it shall be treated as being part of the building or structure on which the point of emission is located.

2. Where a situation exists as described in subclauses i, ii and iii of clause *b* all points of emission of a contaminant shall be considered as if the total emission comes from the building such that the building itself is a point of emission.

3. Where K yields a value greater than the concentration of the contaminant at the point of emission, the concentration of the contaminant at the point of emission shall be deemed to be the value of K.

4. The wind-oriented centre of a building or structure is obtained by circumscribing the plan view of the building or structure with the smallest possible rectangle, two sides of which are parallel to the chosen wind direction, and the intersection of the diagonals of this rectangle is the wind-oriented centre. (*see figure 11*)

5. Where an emission or emissions is from only one building or structure, the wind direction shall be that direction that is parallel to a line joining the wind-oriented centre of the building or structure and the point of impingement and the value of the exponential expression involving Y is one.
(In such a situation the value of Y becomes zero)

6. Where emissions from only one building or structure are being evaluated the wind direction shall be so chosen that the value of G is the horizontal distance in metres between the point of impingement and a vertical line through the wind-oriented centre of the building or structure on which the point of emission is located.
(*see figure 15*)

(*c*) where the point of emission is not affected by any of the conditions described in subclauses i, ii or iii of clause *a* or subclauses i, ii or iii of clause *b*, the following formula shall be applied:
(*see figures 16, 17, 18 and 19*)

$$K = \frac{10^6 \times Q \times F}{6.28 \times \sigma_y \times \sigma_z \times U} \times \exp\left[-\frac{1}{2}\left(\frac{Y}{\sigma_y}\right)^2\right] \times \left\{\exp\left[-\frac{1}{2}\left(\frac{Z-H}{\sigma_z}\right)^2\right] + \exp\left[-\frac{1}{2}\left(\frac{Z+H}{\sigma_z}\right)^2\right]\right\}$$

Where: K is the half hour average concentration of the contaminant at the point of impingement in micrograms per cubic metre

Q is the rate of emission in grams per second of the contaminant

U is the wind speed in metres per second

exp is the exponential function where e = 2.7183

Y is the straight line distance in metres between the point of impingement and a vertical plane through the point of emission in the chosen direction of the wind
(*see figure 20*)
(*see note 3*)

Z is the difference in height, in metres, between the point of impingement and the ground level at or beneath the point of impingement

H is the effective height of the emission of a contaminant

F is a factor related to the atmospheric stability of the air

σ_y is a function which defines the amount of dispersion of the contaminant in a horizontal direction at the point of impingement

σ_z is a function which defines the amount of dispersion of the contaminant in a vertical direction at the point of impingement

Determination of K 1. Two values for K shall be determined using the formula in clause *c*.

2. The maximum value obtained for K shall be applied in this Regulation.
(*see note 1*)

Value number 1 for K is determined as follows:

Where: U is the speed of the wind in metres per second
(*see note 2*)

H is determined as follows:

$$H = h + \left(\frac{v_s d}{u}\right) \times \left[1.5 + 2.68 \frac{(T_s - 283)d}{T_s}\right]$$

Where: h is the height above grade, in metres, of the point of emission

v_s is the speed in metres per second in an upward vertical direction of the contaminant gas stream at the point of emission to the atmosphere
(*see note 4*)

d is the diameter in metres of a circle of equivalent area to that area through which the contaminant gas stream enters the air

u is the speed of the wind in metres per second
(*see note 5*)

T_s is the temperature in degrees Kelvin (273° + temperature in Degrees Celsius) of the contaminant gas stream at the point of emission

F is 0.6

σ_y is determined as follows:

Calculate X where X is the horizontal distance in metres between the point of emission and the line where vertical planes, one through the point of emission and parallel to the chosen direction of the wind and the other through the point of impingement, meet at right angles.
(*see figure 21*)
(*see notes 6 and 7*)

Where the value of X is equal to or less than 2500

$$\sigma_y = 0.176X^{0.92445}$$

When the value of X is greater than 2500

$$\sigma_y = 0.268X^{0.87248}$$

σ_z is determined as follows:

When the value of X is determined in the calculation of σ_y is equal to or less than 2500

$$\sigma_z = 0.106X^{0.91926}$$

When the value of X is greater than 2500

$$\sigma_z = 0.120X^{0.90564}$$

(*see note 8*)

Value number 2 for K is determined as follows:

H has the same value for H as determined for value number 1 for K

F is 0.8

σ_y is determined as follows:

Where X has the same value for X as determined for value number 1 for K

Where the value of X is equal to or less than 700

$$\sigma_y = 0.110\ X^{0.93062}$$

Where the value of X is greater than 700 but less than 7000

$$\sigma_y = 0.120\ X^{0.91837}$$

Where the value of X is equal to or greater than 7000

$$\sigma_y = 0.191\ X^{0.86538}$$

σ_z is determined as follows:

Where X has the same value as determined in the calculation of σ_y

Where X is equal to or less than 700

$$\sigma_z = 0.091\ X^{0.8553}$$

Where X is greater than 700 but less than 7000

$$\sigma_z = 0.352\ X^{0.6495}$$

Where X is equal to or greater than 7000

$$\sigma_z = 0.955\ X^{0.53857}$$

(*see note 8*)

NOTES:

1. Where K yields a value greater than the concentration of the contaminant at the point of emission, the concentration of the contaminant at the point of emission shall be deemed to be the value of K.

2. The wind speed shall have a minimum value of 2.235 metres per second and a maximum value of 18.235 metres per second. A value of K shall be determined for wind speed increments of 0.5 metres per second until a maximum value of K is found.

3. Where only a single point of emission is being evaluated the wind direction shall be so chosen that the value of Y becomes zero (therefore the value of exp expression containing Y becomes equal to one.)

4. Where the value of v_s is less than 7 metres per second the value of v_s shall be zero.

5. The value for u shall be consistent with the values substituted directly for u in the equation used for evaluating K.

6. Where a single source of emission is being evaluated, the wind direction shall be so chosen that the value of X shall be the horizontal distance in metres between the point of impingement and a vertical line through the point of emission. (*see figure 22*)

7. In the calculation of K at ground level, the value of X shall be so chosen that the maximum value of K is found.

8. For each point of impingement, for each wind direction chosen, and for each value of X, U shall be varied until the maximum value of K is found.

(*d*) where the emissions of a contaminant are from more than one source, the contaminant concentrations at the point of impingement, resulting from each individual source, for the conditions set out in clauses *a*, *b* and *c* shall be added together to give an aggregate value for K.

The aggregate value of K shall be determined for all wind directions and all permissible wind speeds for value of K, where applicable. The largest aggregate K obtained shall be the value of K to apply in this Regulation. O. Reg. 873/74, s. 6.

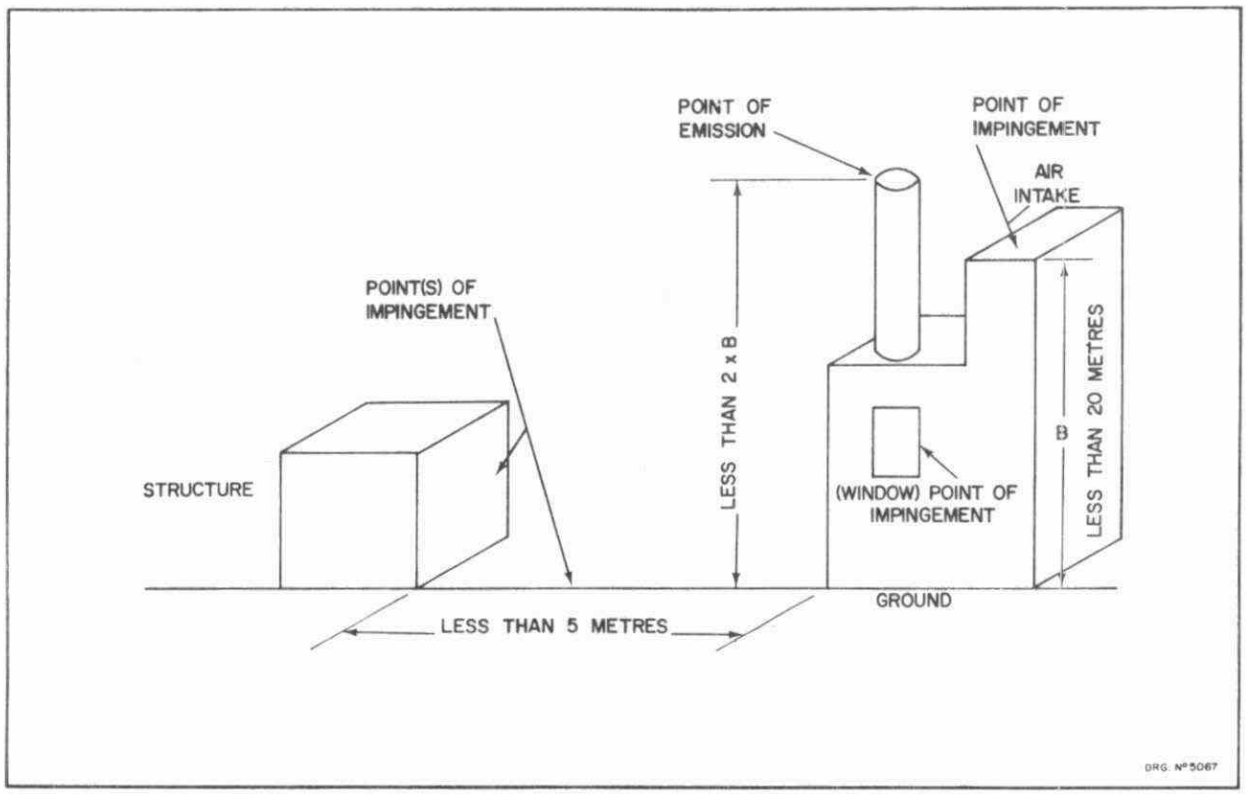


FIGURE 1.

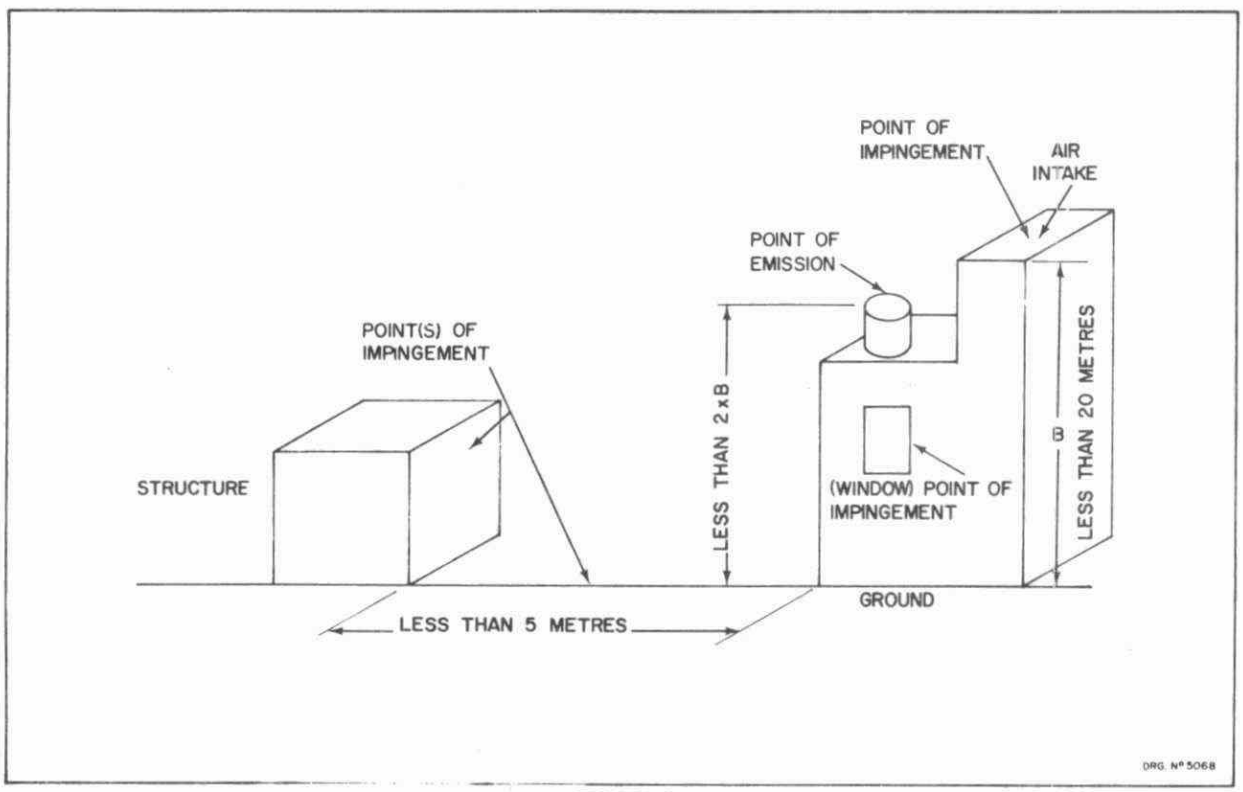


FIGURE 2.

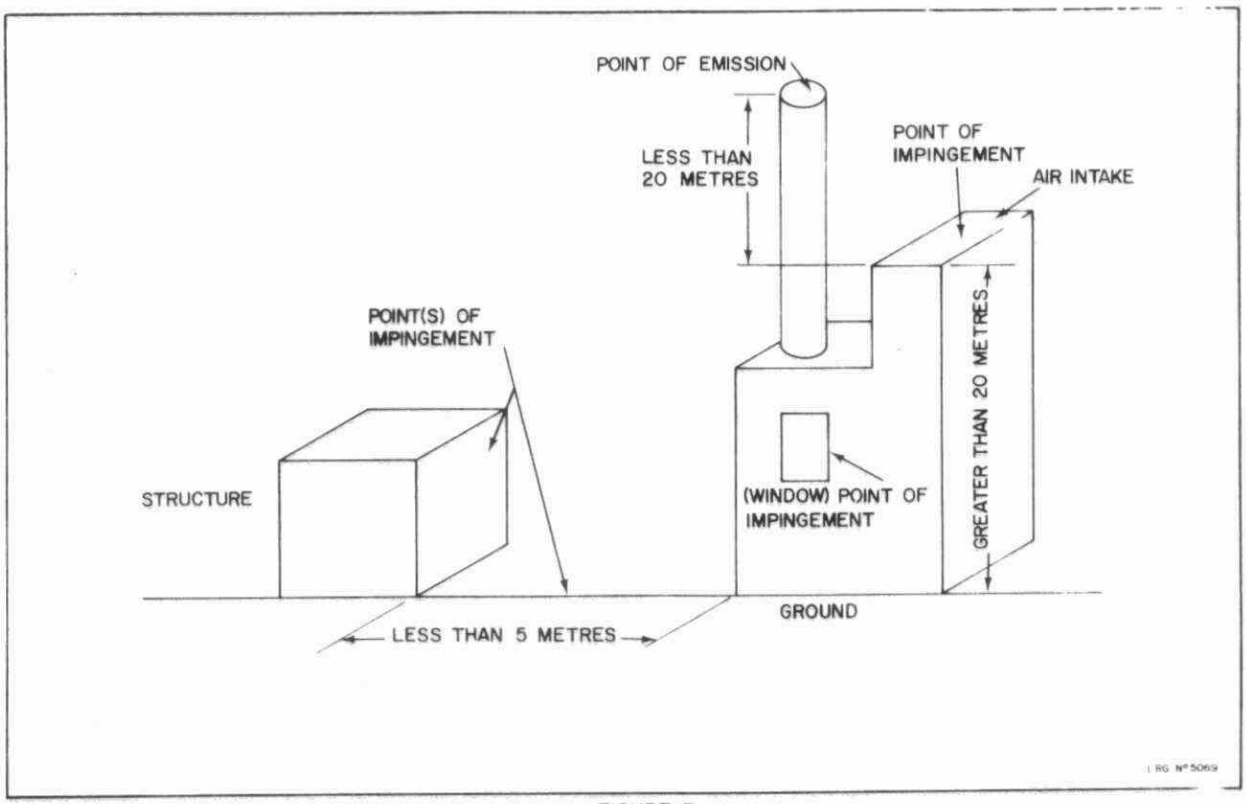
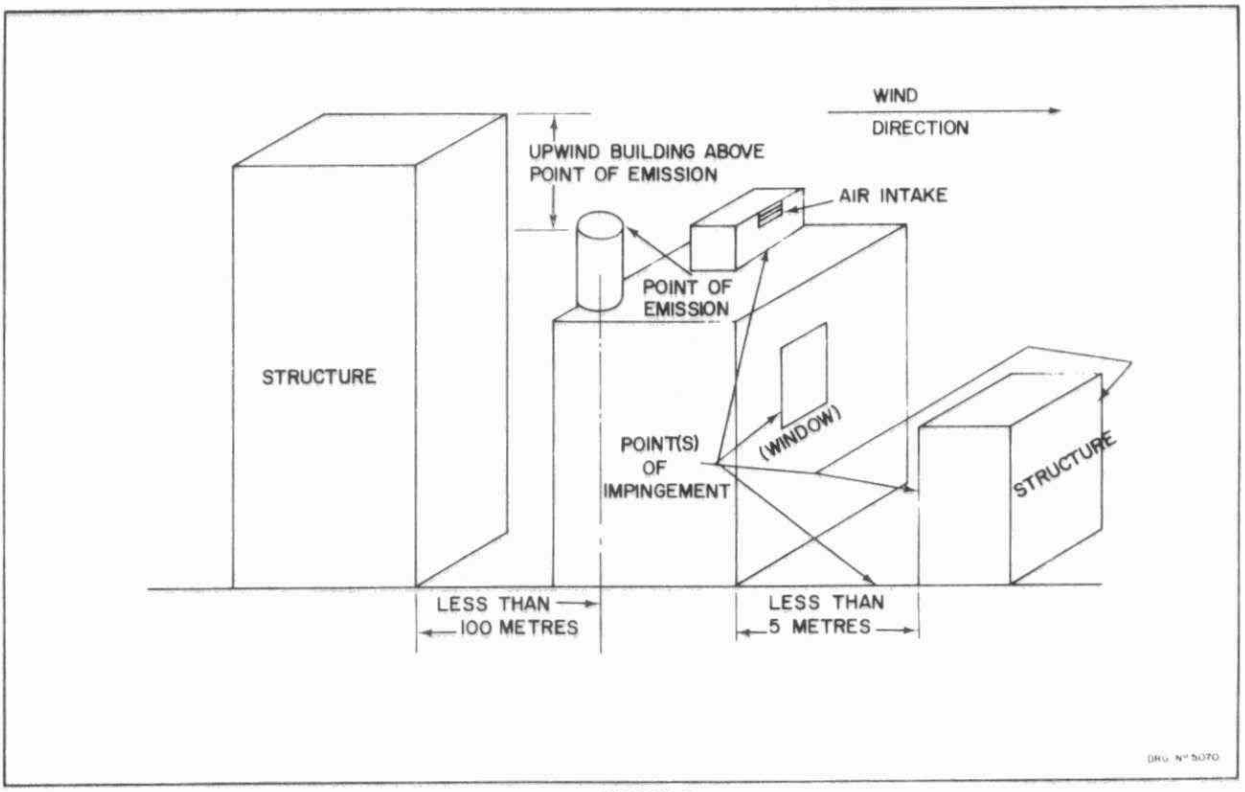


FIGURE 3.



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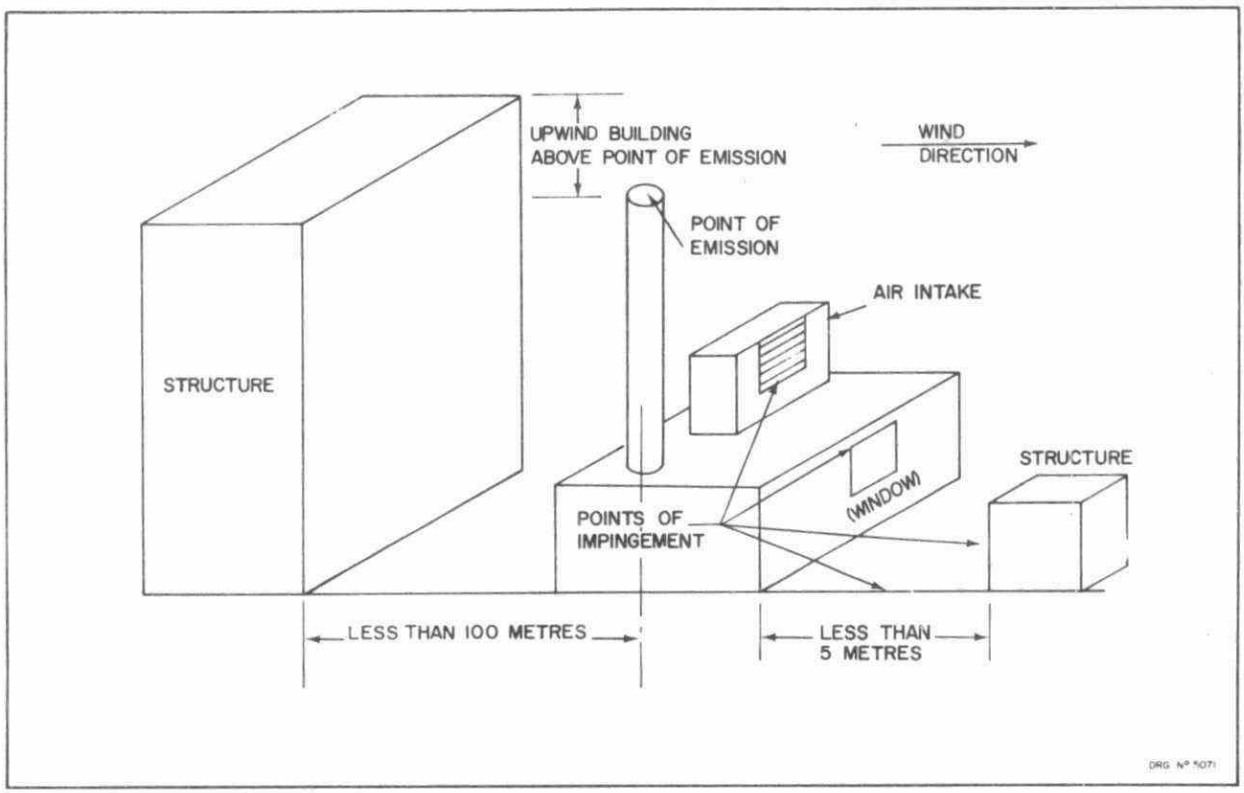

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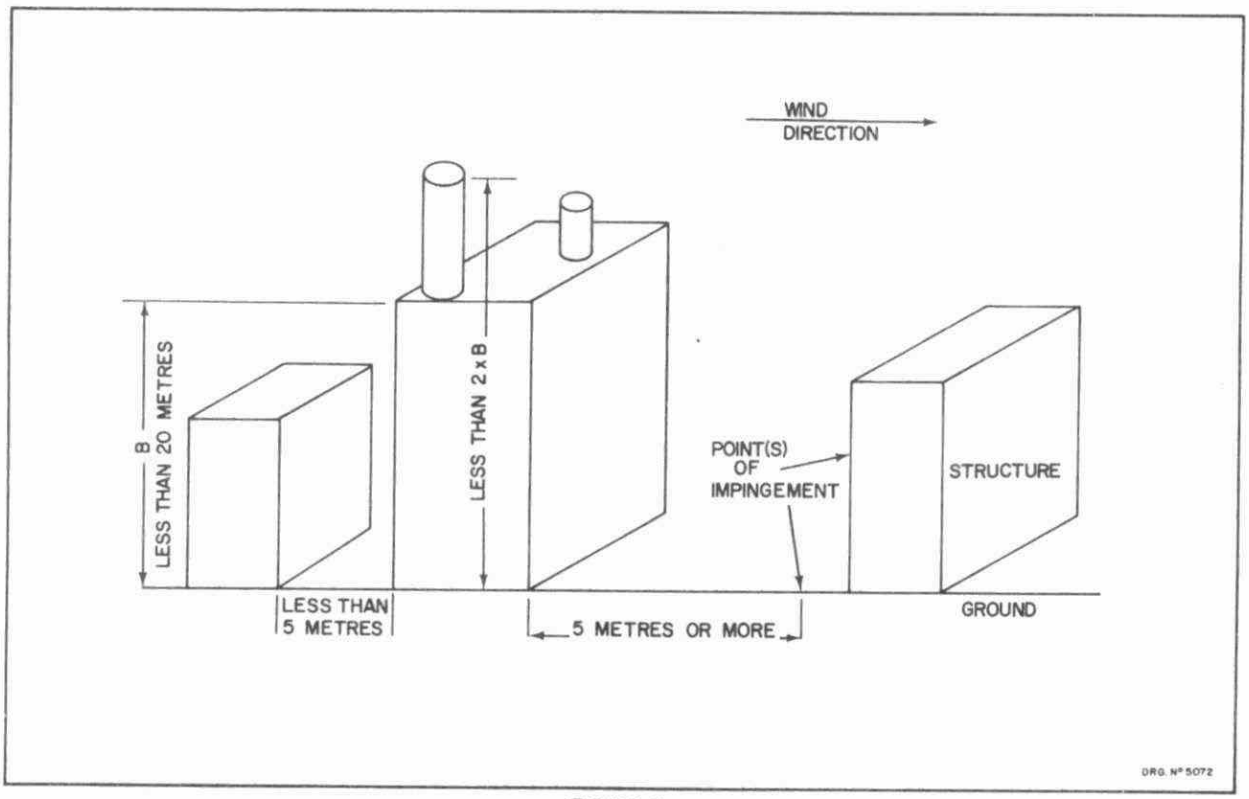

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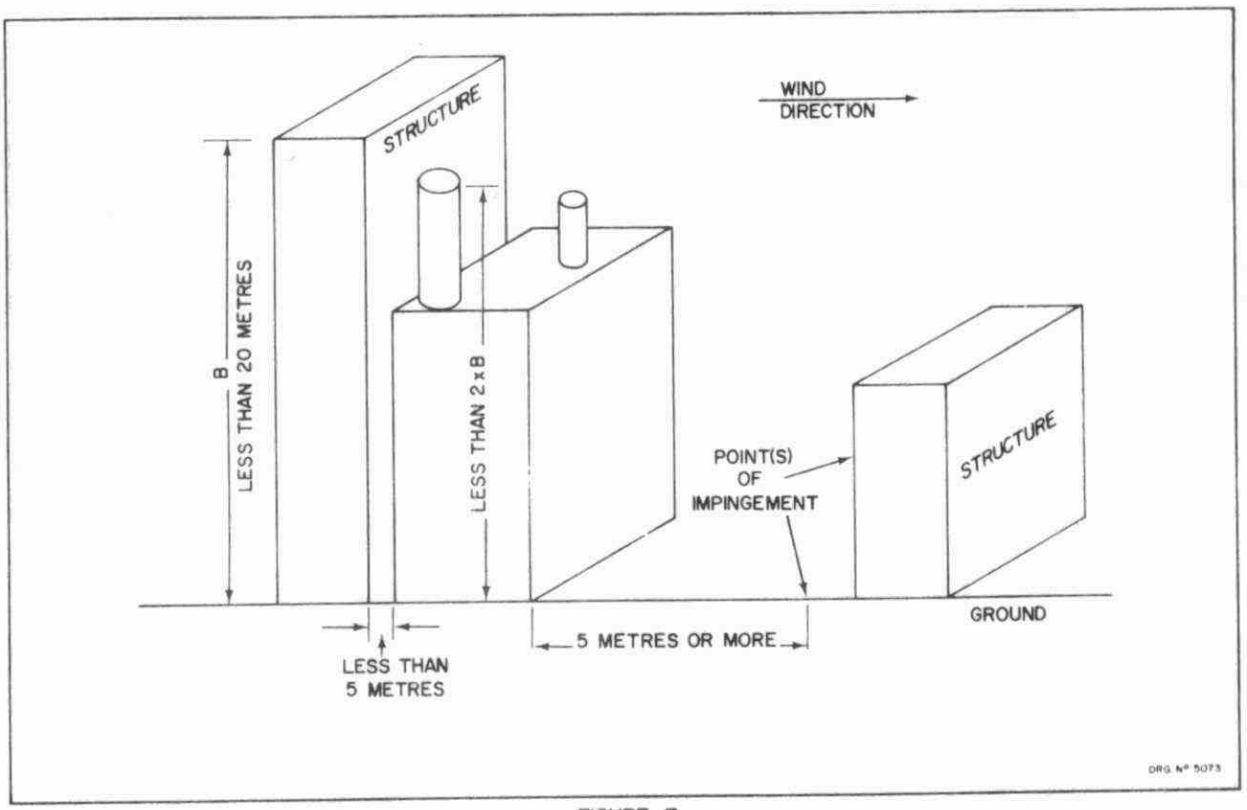

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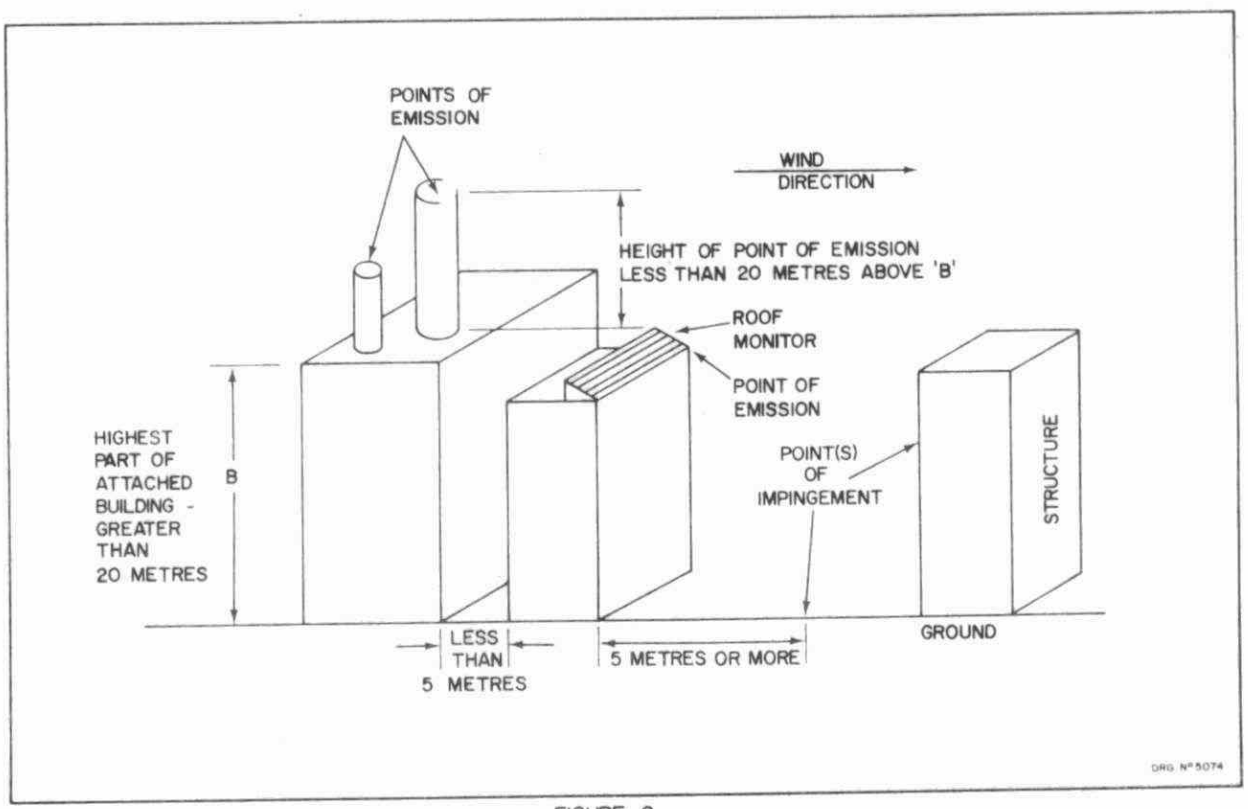

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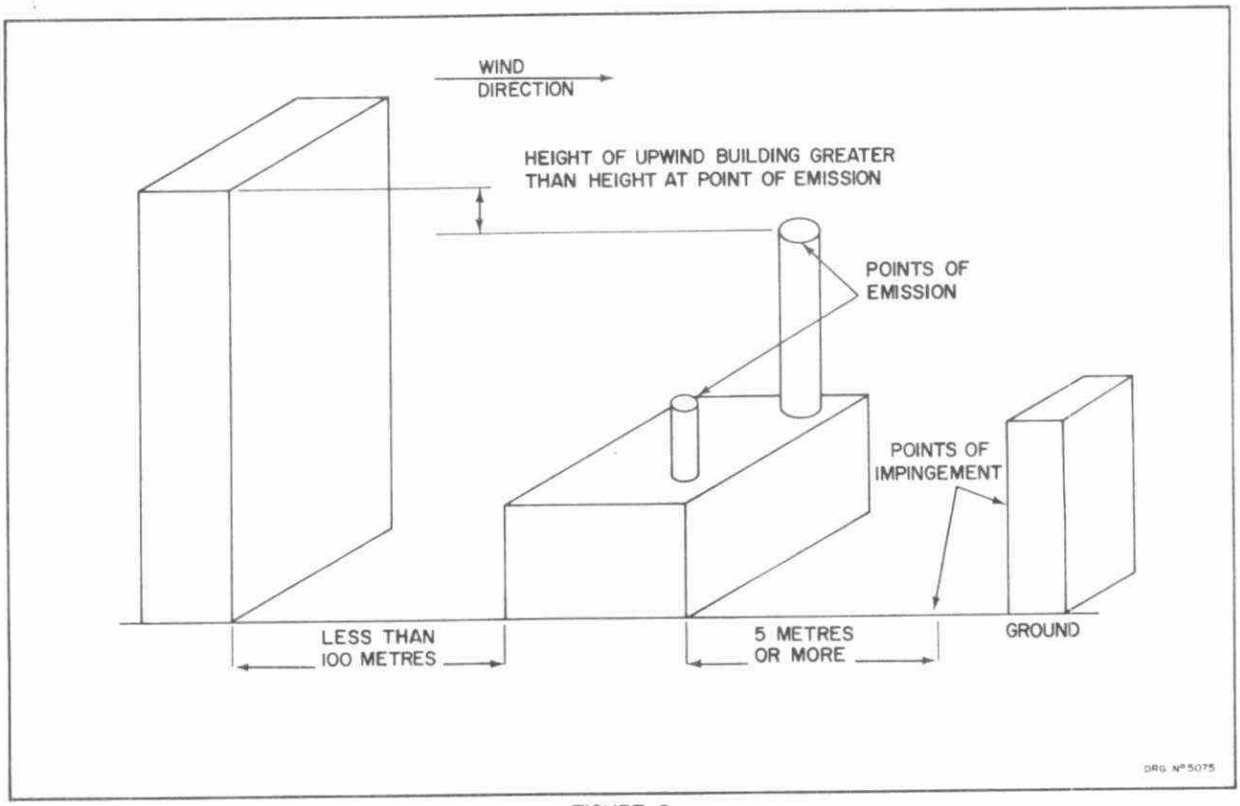

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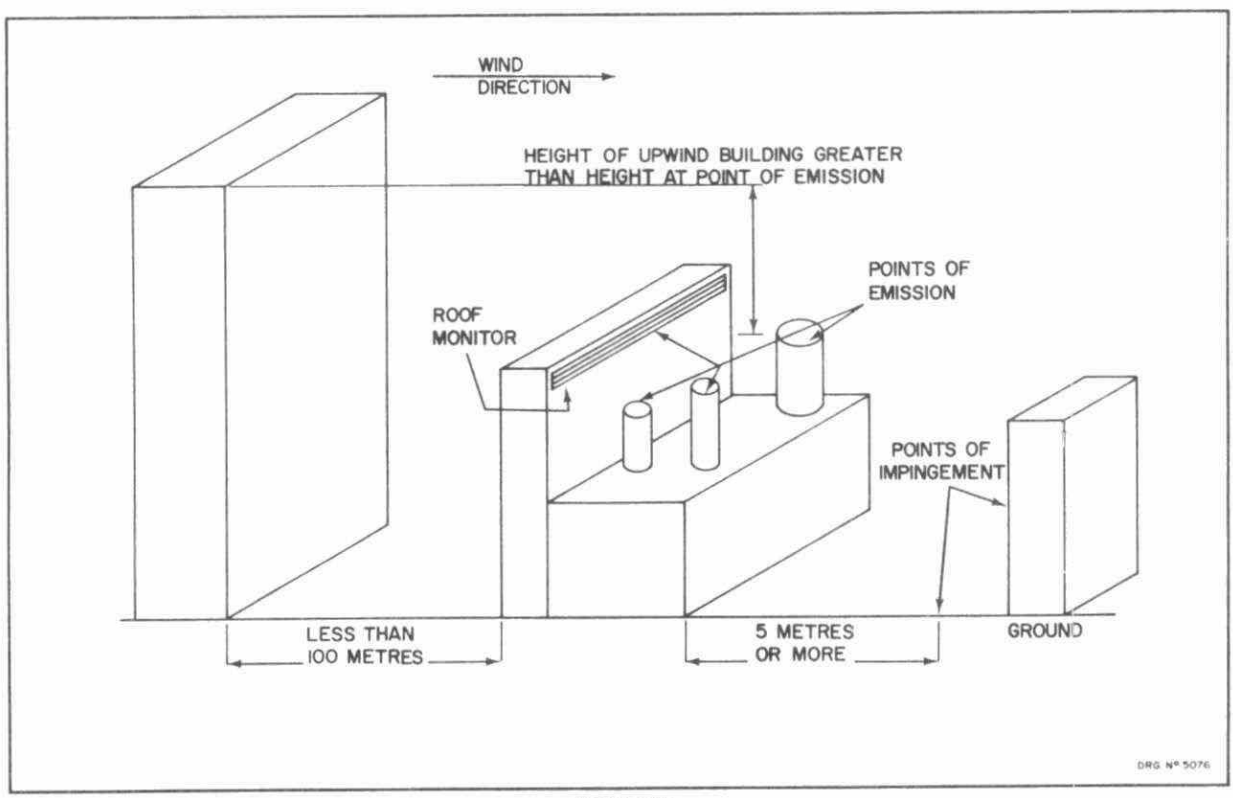

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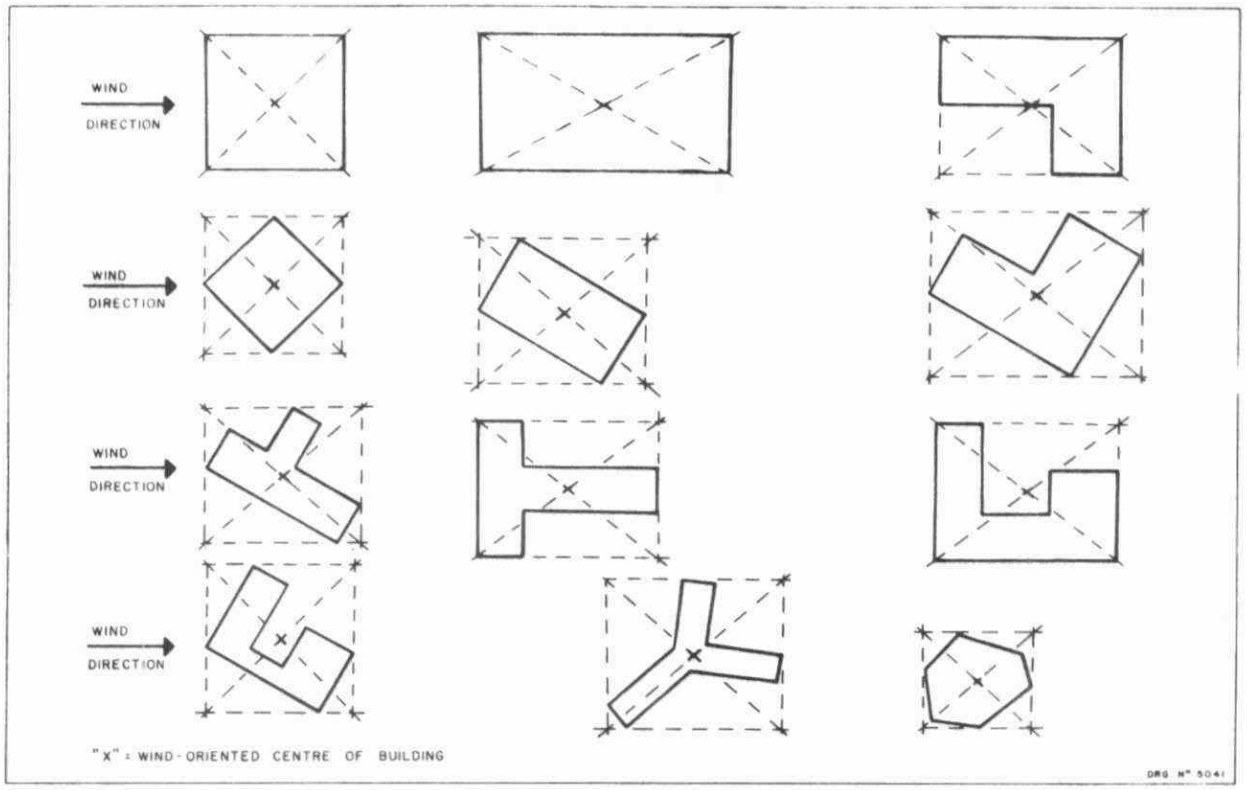
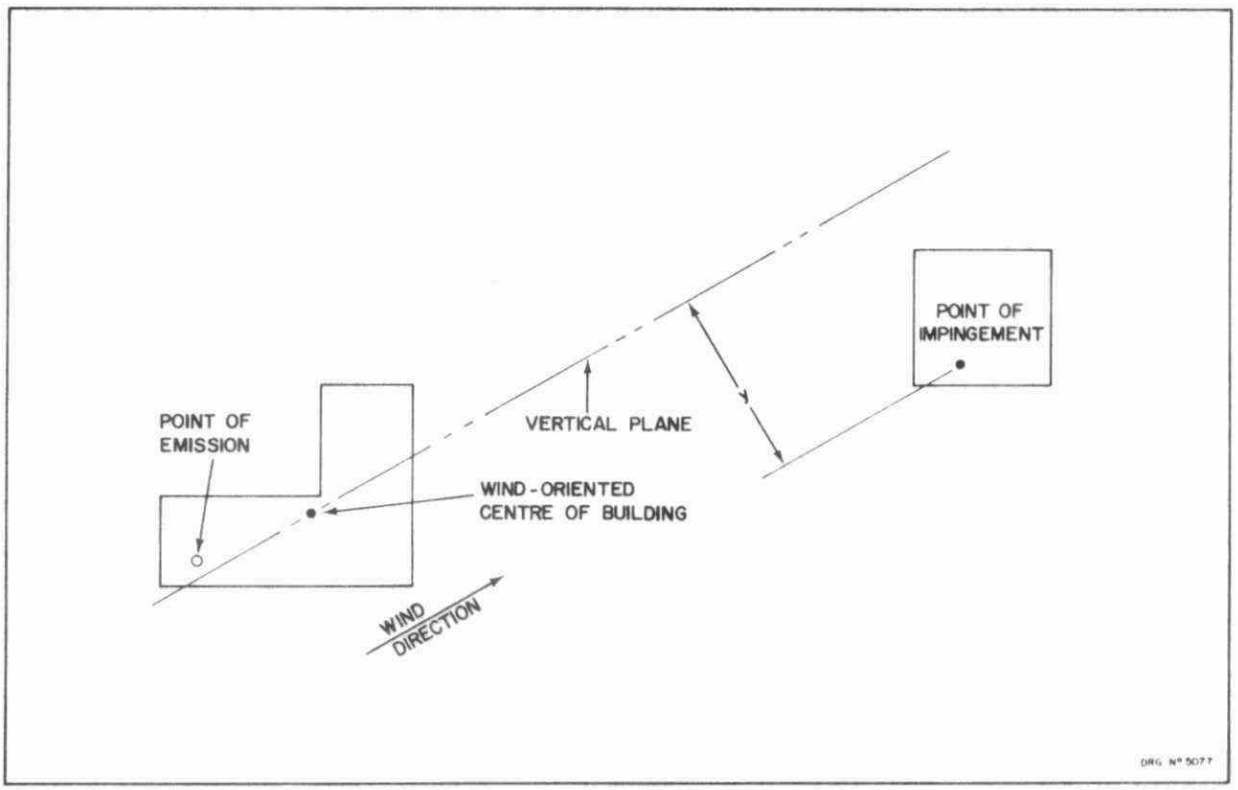


FIGURE 11



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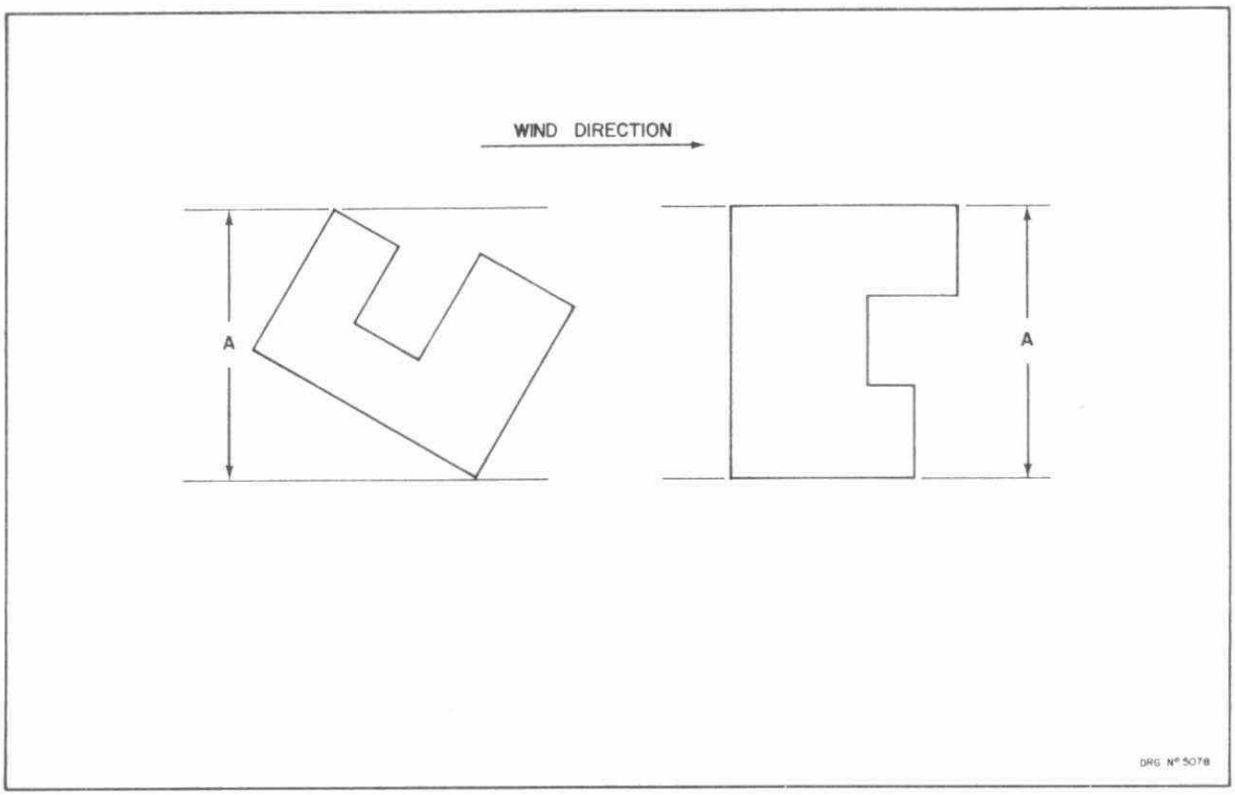

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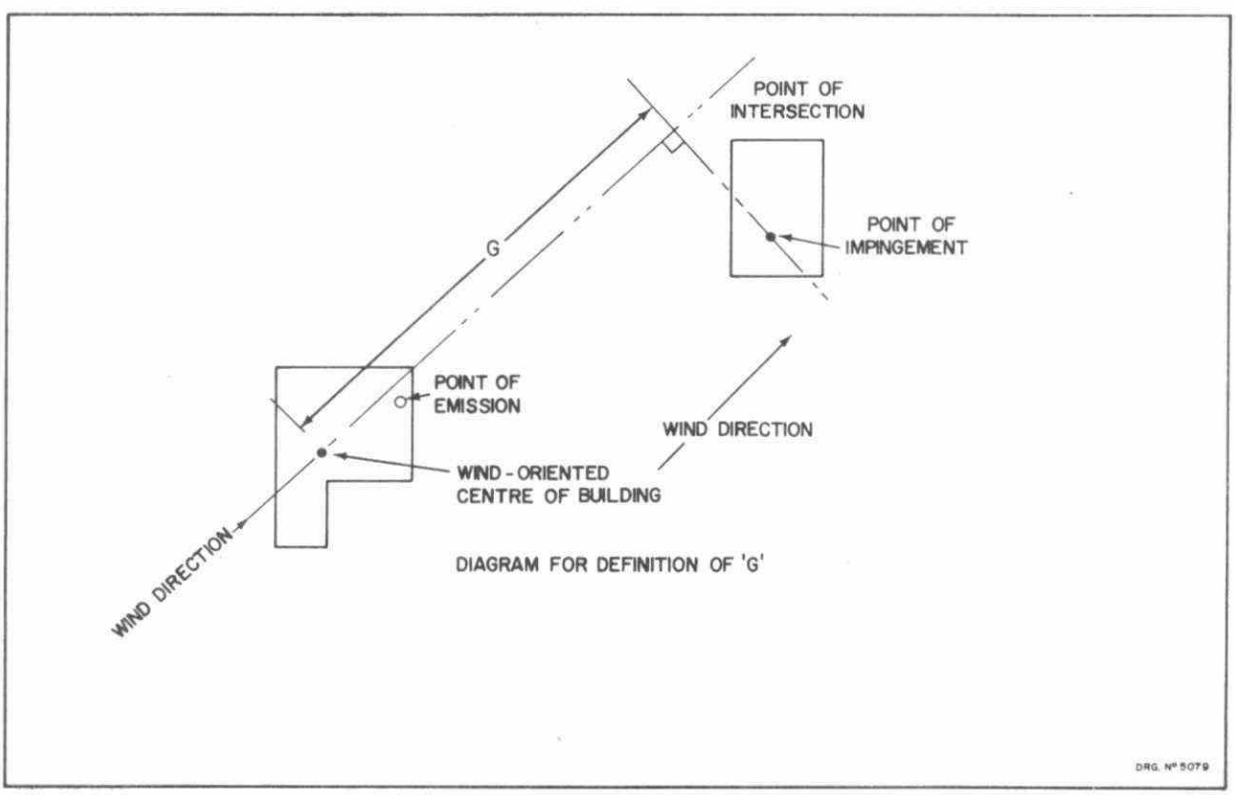

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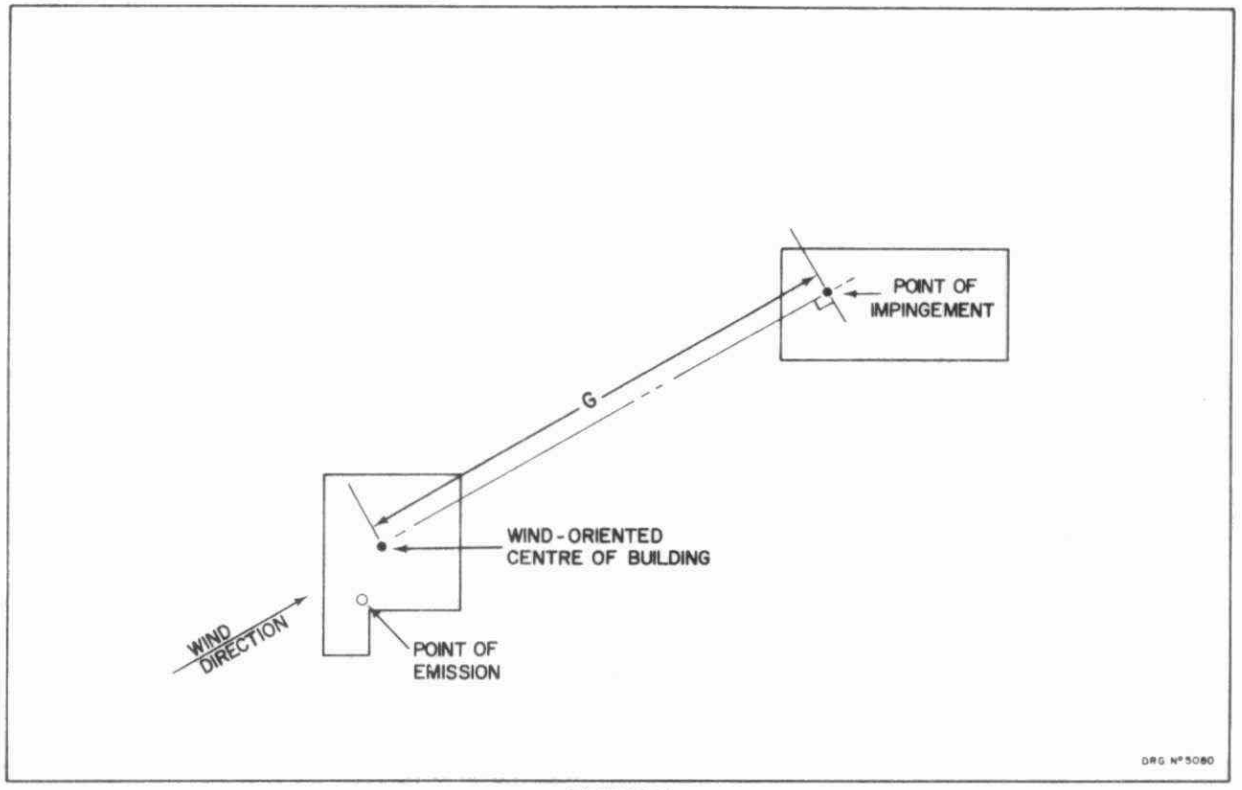


FIGURE 15.

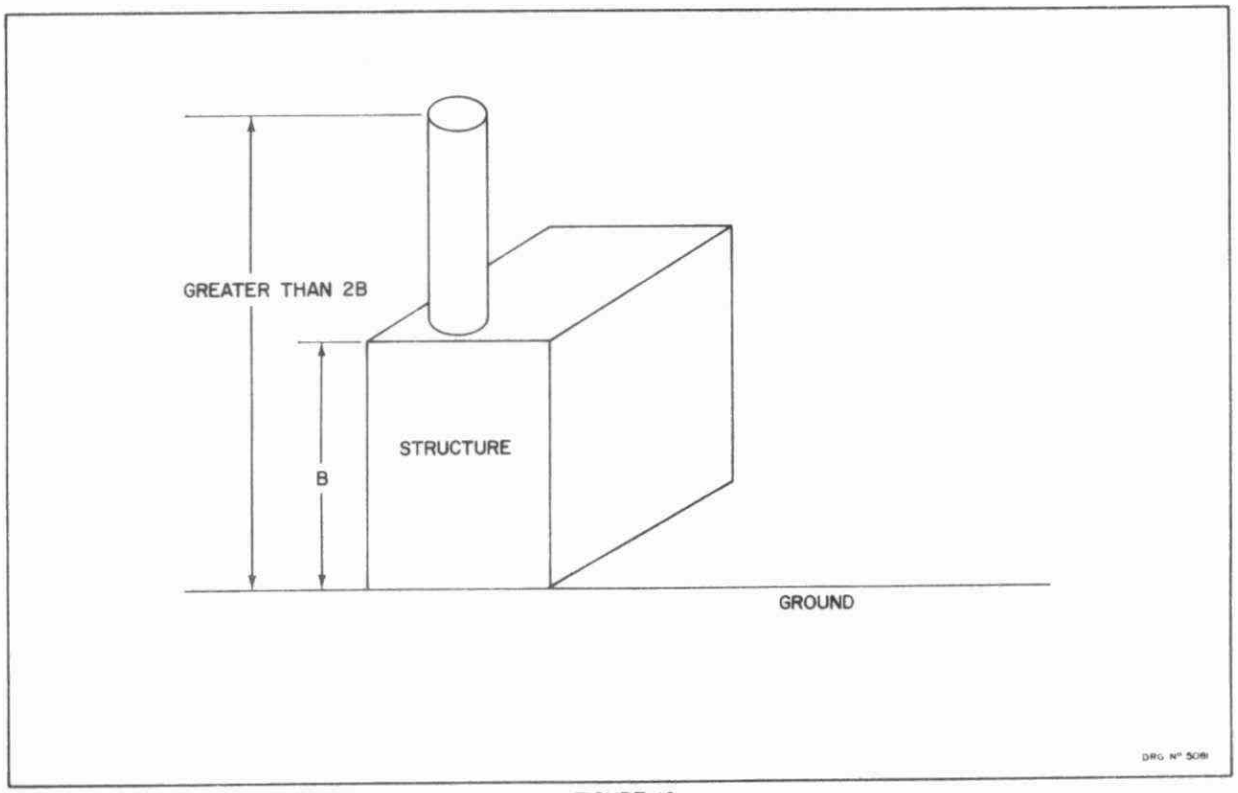


FIGURE 16.

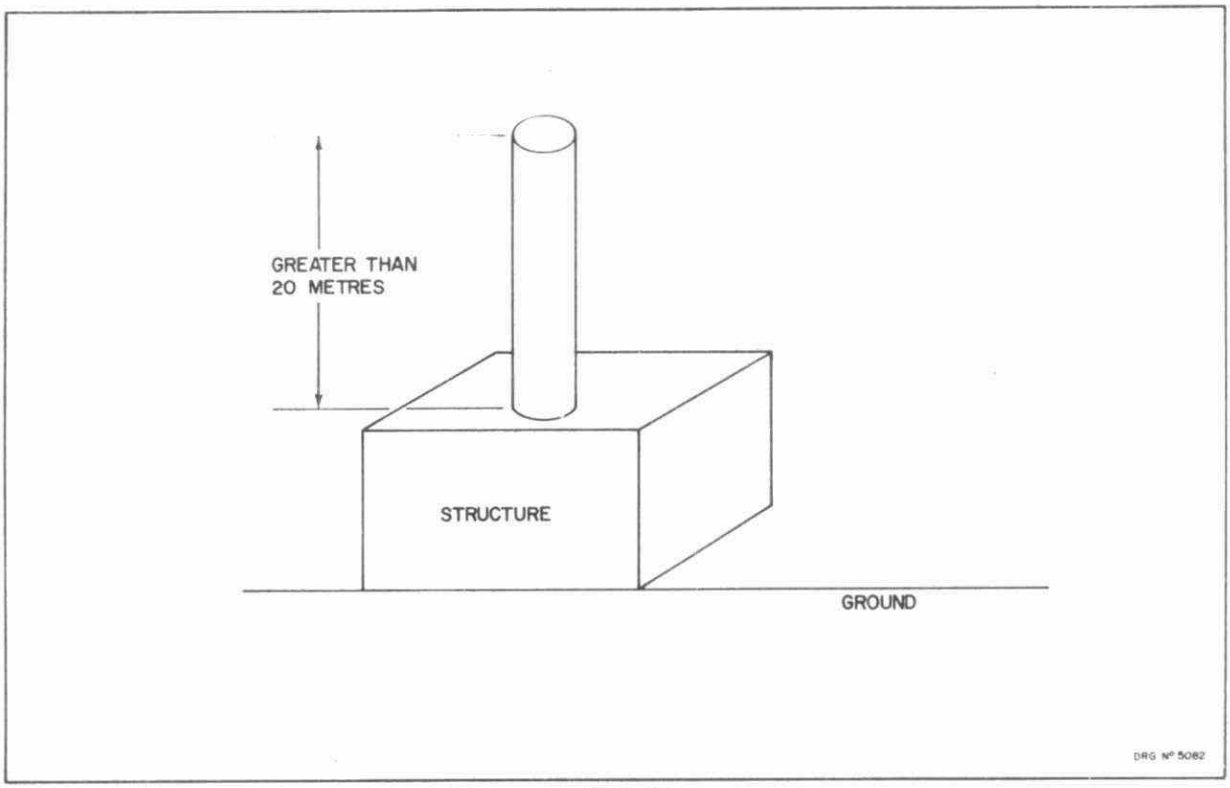
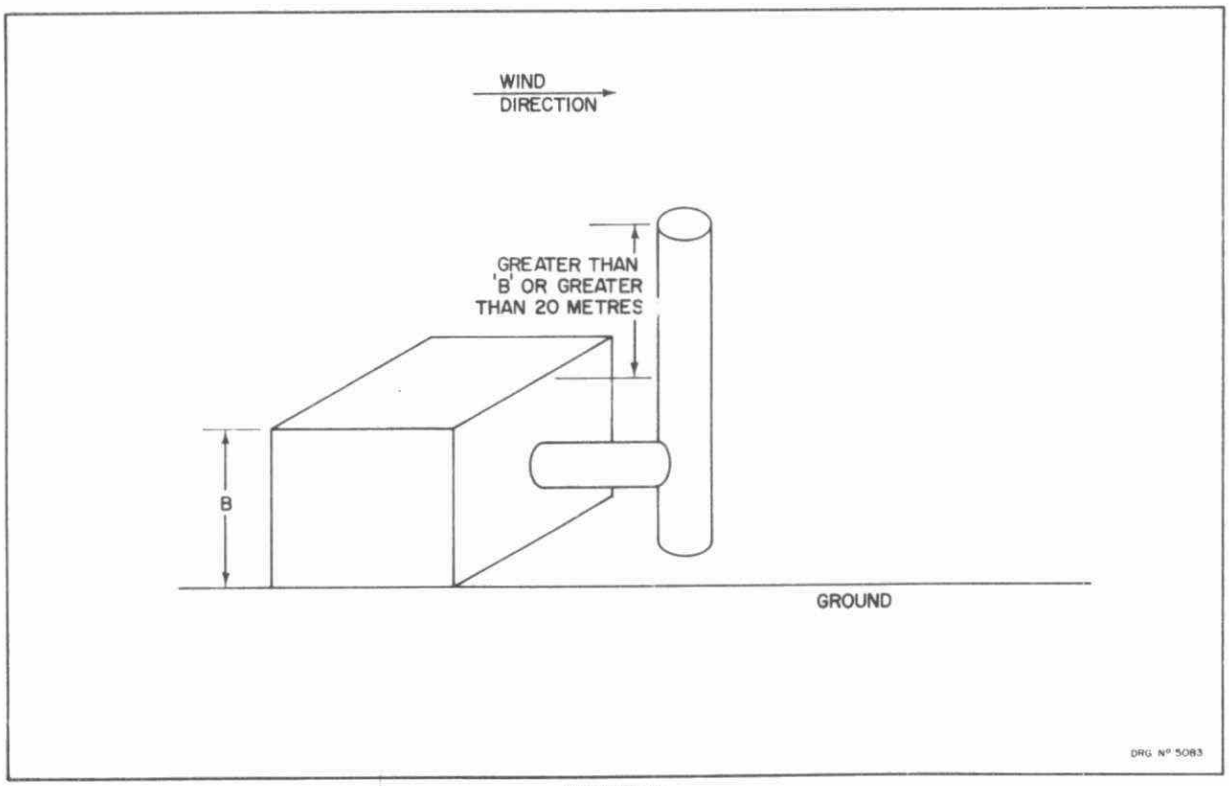


FIGURE 17.



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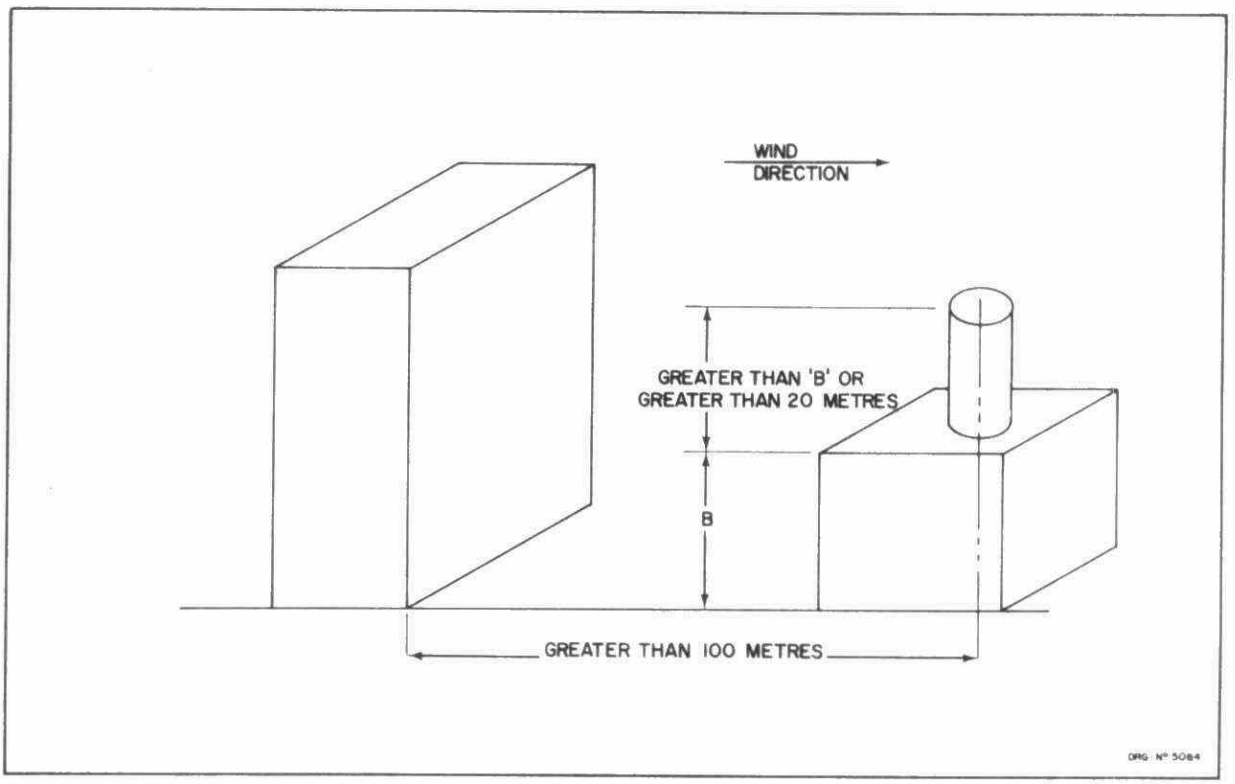

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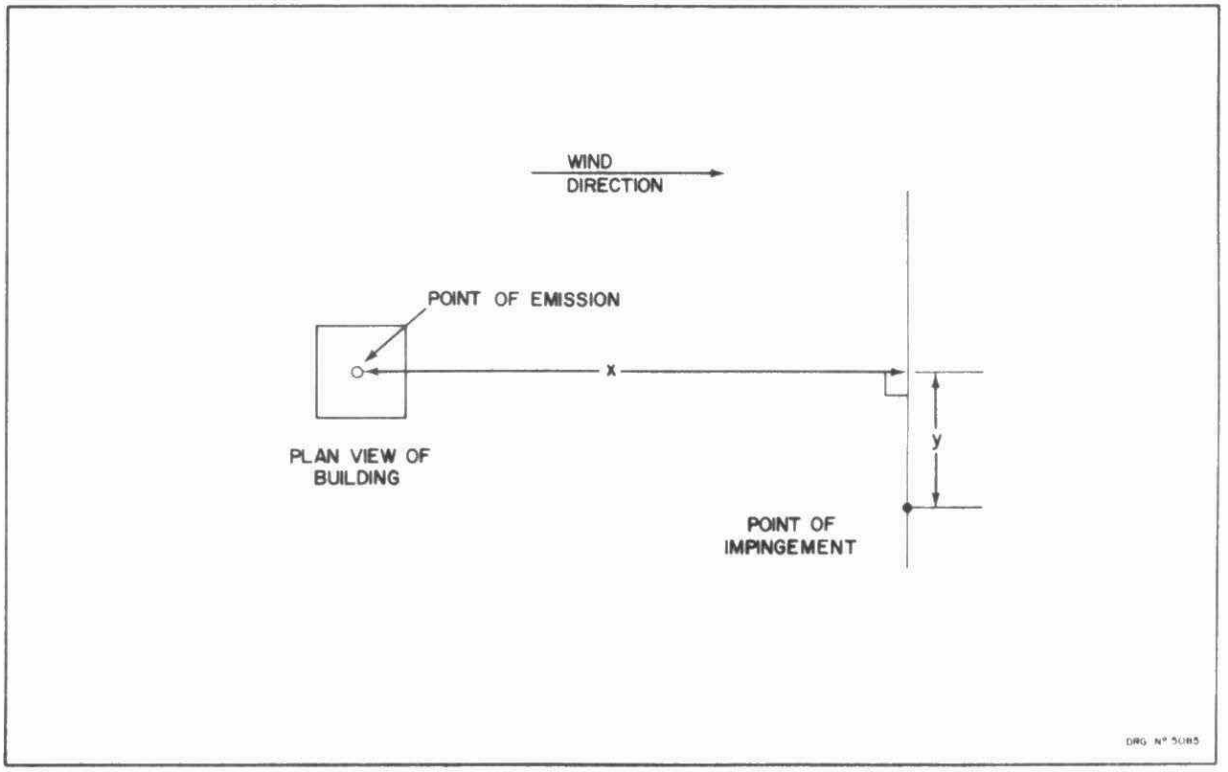

FIGURE 20.

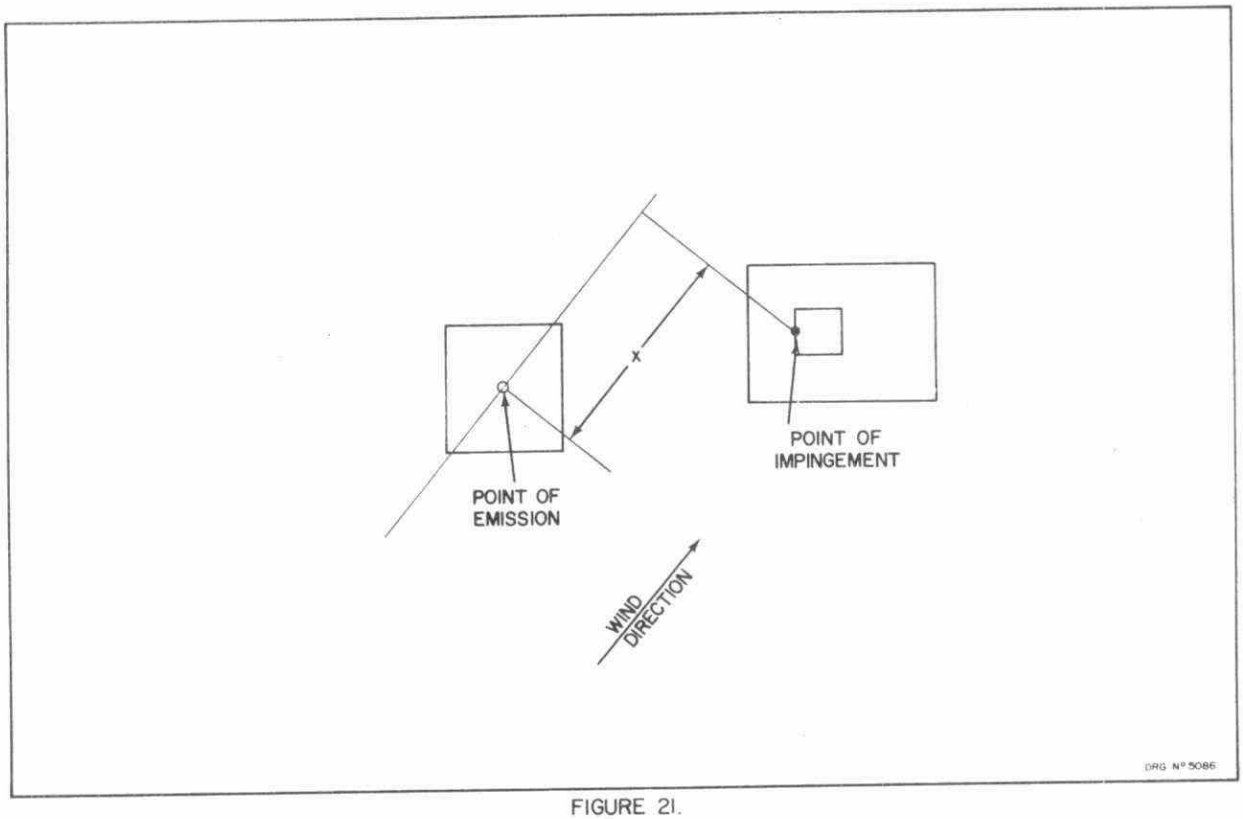

FIGURE 21.

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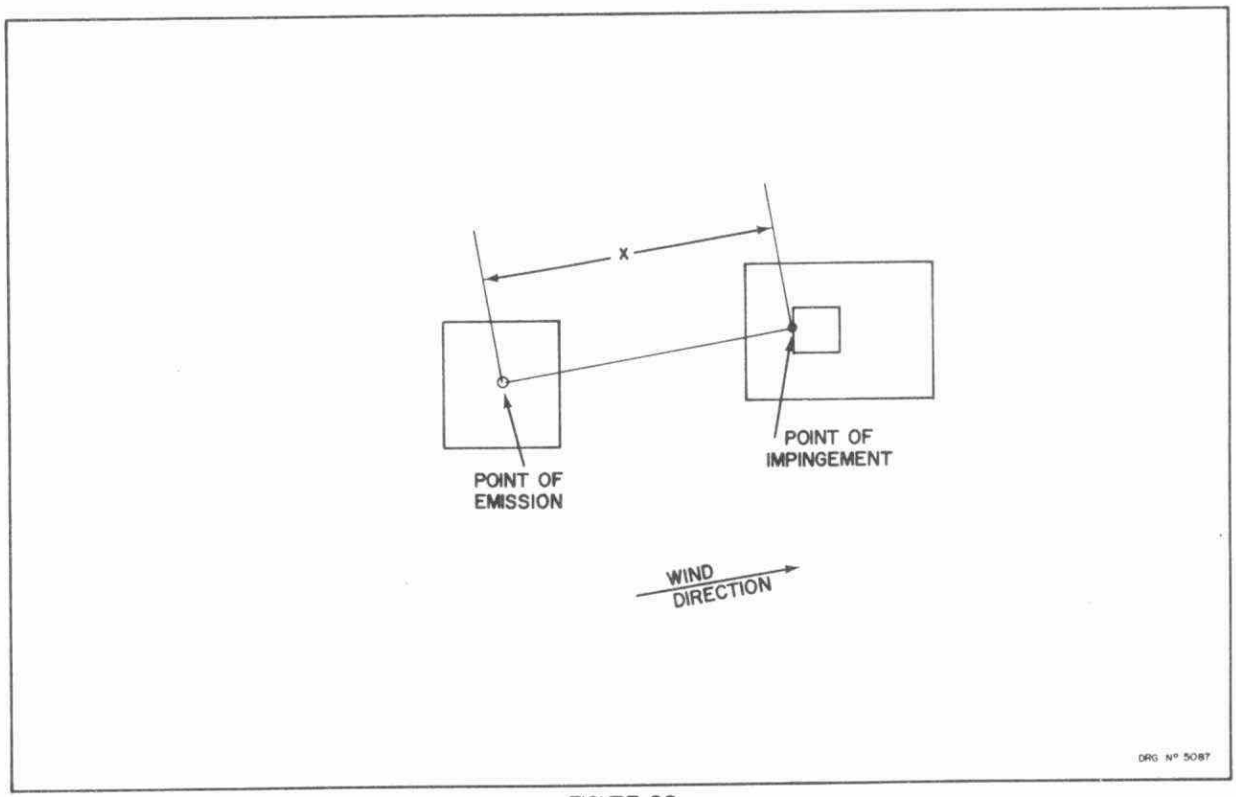

FIGURE 22.

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Schedules 1 and 2. REVOKED. O. Reg. 873/74, s. 7, *part*.

O. Reg. 873/74, s. 7, *part*. Sched.

Schedule 1

Item	Column 1	Column 2	Column 3
	Name of Contaminant	Unit of Concentration	Concentration at Point of Impingement—Half Hour Average
1.	Acetic Acid	Micrograms of acetic acid per cubic metre of air	2,500
2.	Acetylene	Micrograms of acetylene per cubic metre of air	56,000
3.	Ammonia	Micrograms of ammonia per cubic metre of air	3,600
4.	Antimony	Total micrograms of antimony in free and combined form per cubic metre of air	75
5.	Arsenic	Total micrograms of arsenic in free and combined form per cubic metre of air	75
6.	Arsine	Micrograms of arsine per cubic metre of air	30
7.	Benzene	Micrograms of benzene per cubic metre of air	10,000
8.	Beryllium	Total micrograms of beryllium in free and combined form per cubic metre of air	0.03
9.	Boron Tribromide	Micrograms of boron tribromide per cubic metre of air	100
10.	Boron Trichloride	Micrograms of boron trichloride per cubic metre of air	100
11.	Boron Trifluoride	Micrograms of boron trifluoride per cubic metre of air	5.0
12.	Boron	Total micrograms of boron in free and combined form per cubic metre of air	100
13.	Bromine	Micrograms of bromine per cubic metre of air	70
14.	Cadmium	Total micrograms of cadmium in free and combined form per cubic metre of air	5.0

Item	Column 1	Column 2	Column 3
	Name of Contaminant	Unit of Concentration	Concentration at Point of Impingement—Half Hour Average
15.	Calcium Hydroxide	Micrograms of calcium hydroxide per cubic metre of air	27
16.	Calcium Oxide	Micrograms of calcium oxide per cubic metre of air	20
17.	Carbon Black	Micrograms of carbon black per cubic metre of air	25
18.	Carbon Disulphide	Micrograms of carbon disulphide per cubic metre of air	330
19.	Carbon Monoxide	Micrograms of carbon monoxide per cubic metre of air	6,000
20.	Carbon Tetrachloride	Micrograms of carbon tetrachloride per cubic metre of air	20,000
21.	Chlorine	Micrograms of chlorine per cubic metre of air	300
22.	Chlorine Dioxide	Micrograms of chlorine dioxide per cubic metre of air	85
23.	Chromium	Total micrograms of chromium in free and combined form per cubic metre of air	30
24.	Copper	Total micrograms of copper in free and combined form per cubic metre of air	100
25.	Cresols	Micrograms of cresols per cubic metre of air	230
26.	Decaborane	Micrograms of decaborane per cubic metre of air	50
27.	Detergent Enzyme (Subtilisin)	Micrograms of subtilisin per cubic metre of air	1.0
28.	Diborane	Micrograms of diborane per cubic metre of air	20
29.	Dicapryl Phthalate	Micrograms of dicapryl phthalate per cubic metre of air	100
30.	Dimethyl Disulphide	Micrograms of dimethyl disulphide per cubic metre of air	40
31.	Dimethyl Sulphide	Micrograms of dimethyl sulphide per cubic metre of air	30
32.	Dioctyl Phthalate	Micrograms of dioctyl phthalate per cubic metre of air	100
33.	Dustfall	Micrograms per square metre	8,000

Item	Column 1	Column 2	Column 3
	Name of Contaminant	Unit of Concentration	Concentration at Point of Impingement—Half Hour Average
34.	Ethyl Acetate	Micrograms of ethyl acetate per cubic metre of air	19,000
35.	Ethyl Acrylate	Micrograms of ethyl acrylate per cubic metre of air	4.5
36.	Ethylene Oxide	Micrograms of ethylene oxide per cubic metre of air	28,500
37.	Ferric Oxide	Micrograms of ferric oxide per cubic metre of air	75
38.	Fluorides, (Gaseous) (April 15 to October 15)	Micrograms of gaseous, inorganic fluoride per cubic metre of air expressed as hydrogen fluoride	4.3
39.	Fluorides, (Total) (April 15 to October 15)	Total micrograms of inorganic fluoride per cubic metre of air expressed as hydrogen fluoride	8.6
40.	Fluorides, (Total) (October 16 to April 14)	Total micrograms of inorganic fluoride per cubic metre of air expressed as hydrogen fluoride	17.2
41.	Formaldehyde	Micrograms of formaldehyde per cubic metre of air	65
42.	Hydrogen Chloride	Micrograms of hydrogen chloride per cubic metre	100
43.	Hydrogen Cyanide	Micrograms of hydrogen cyanide per cubic metre of air	1,150
44.	Hydrogen Sulphide	Micrograms of hydrogen sulphide per cubic metre of air	30
45.	Iron (metallic)	Micrograms of metallic iron per cubic metre of air	10
46.	Lead	Total micrograms of lead in free and combined form per cubic metre of air	10
47.	Lithium Hydrides	Total micrograms of lithium hydrides per cubic metre of air	7.5
48.	Lithium	Total micrograms of lithium in other than hydride compounds per cubic metre of air	60
49.	Magnesium Oxide	Total micrograms of magnesium oxide per cubic metre of air	100
50.	Manganese	Total micrograms of manganese in free and combined form per cubic metre of air	100

Item	Column 1	Column 2	Column 3
	Name of Contaminant	Unit of Concentration	Concentration at Point of Impingement—Half Hour Average
51.	Mercaptans	Total micrograms of mercaptans per cubic metre of air expressed as methyl mercaptans	20
52.	Mercury (alkyl)	Total micrograms of mercury compounds per cubic metre of air	1.5
53.	Mercury	Total micrograms of mercury in free and combined form per cubic metre of air	5.0
54.	Methyl Acrylate	Micrograms of methyl acrylate per cubic metre of air	4.0
55.	Methyl Chloroform (1-1-1 Trichloroethane)	Micrograms of methyl chloroform per cubic metre of air	350,000
56.	Methyl Ethyl Ketone (2-Butanone)	Micrograms of methyl ethyl ketone per cubic metre of air	31,000
57.	Methyl Methacrylate	Micrograms of methyl methacrylate per cubic metre of air	860
58.	Milk Powder	Micrograms of milk powder per cubic metre of air	20
59.	Nickel	Total micrograms of nickel in free and combined form per cubic metre of air	5
60.	Nickel Carbonyl	Micrograms of nickel carbonyl per cubic metre of air	1.5
61.	Nitric Acid	Micrograms of nitric acid per cubic metre of air	100
62.	Nitrogen Oxides	Micrograms of nitrogen oxides per cubic metre of air expressed as NO_2	500
63.	Ozone	Micrograms of ozone per cubic metre of air	200
64.	Pentaborane	Micrograms of pentaborane per cubic metre of air	3.0
65.	Pentachloraphenol	Micrograms of pentachloraphenol per cubic metre of air	90
66.	Phenol	Micrograms of phenol per cubic metre of air	100
67.	Phosgene	Micrograms of phosgene per cubic metre of air	130
68.	Phosphoric Acids	Micrograms of phosphoric acids per cubic metre of air expressed as P_2O_5	100

Item	Column 1	Column 2	Column 3
	Name of Contaminant	Unit of Concentration	Concentration at Point of Impingement—Half Hour Average
69.	Phthalic Anhydride	Micrograms of phthalic anhydride per cubic metre of air	100
70.	Silver	Total micrograms of silver in free and combined form per cubic metre of air	3
71.	Sulphur Dioxide	Micrograms of sulphur dioxide per cubic metre of air	830
72.	Sulphuric Acid	Micrograms of sulphuric acid per cubic metre of air	100
73.	Suspended Particulate Matter (particulate less than 44 microns in size)	Total micrograms of suspended particulate matter per cubic metre of air	100
74.	Tetrahydrofuran	Micrograms of tetrahydrofuran per per cubic metre of air	93,000
75.	Tin	Total micrograms of tin in free and combined form per cubic metre of air	30
76.	Titanium	Total micrograms of titanium in free and combined form per cubic metre of air	100
77.	Toluene	Micrograms of toluene per cubic metre of air	2,000
78.	Toluene Di-isocyanate	Micrograms of toluene di-isocyanate per cubic metre of air	1.0
79.	Trichloroethylene	Micrograms of trichloroethylene per cubic metre of air	85,000
80.	Trifluorotrichloro Ethane	Micrograms of trifluoro trichloroethane per cubic metre of air	2.4 million
81.	Vanadium	Total micrograms of vanadium in free and combined form per cubic metre of air	5.0
82.	Vinylidene chloride (1, 1 Dichloro Ethene)	Micrograms of vinylidene chloride per cubic metre of air	26,000
83.	Xylenes	Micrograms of xylenes per cubic metre of air	2,300
84.	Zinc	Total micrograms of zinc in free and combined form per cubic metre of air	100

O. Reg. 873/74, s.

THE ENVIRONMENTAL PROTECTION ACT, 1971

O. Reg. 872/74.
Ambient Air Quality Criteria.
Made—October 31st, 1974.
Filed—November 13th, 1974.

REGULATION MADE UNDER
THE ENVIRONMENTAL PROTECTION ACT, 1971

AMBIENT AIR QUALITY CRITERIA

1. The desirable ambient air quality criteria for each contaminant set out in Column 1 of the Schedule is that amount of concentration or total amount of contaminant set out opposite thereto in Column 3 of the Schedule in the unit of measurement set out opposite thereto in Column 2 of the Schedule for the time set out opposite thereto in Column 4 of the Schedule. O. Reg. 872/74, s. 1.

Schedule

Item	Column 1	Column 2	Column 3	Column 4	Column 5
	Name of Contaminant	Unit of Measurement	Average Amount of Concentration or Total Amount of Contaminant	Period of Time	Approximate Equivalent at 10°C and 760 mm Hg pressure
1.	Arsenic	Micrograms of Arsenic per cubic metre of air	25	24 hours	
2.	Cadmium	Micrograms of cadmium per cubic metre of air	2.0	24 hours	
3.	Carbon Monoxide	Parts of carbon monoxide per one million parts of air by volume	30 13	1 hour 8 hours	36,200 ug/m³ 15,700 ug/m³
4.	Dustfall	Tons of dustfall per square mile per month	20 Total 13	30 days 1 year	
5.	Fluorides (Gaseous) April 15 to October 15	Parts of fluorides per billion parts of air by volume (Expressed as HF)	1.0 0.4	24 hours 30 days	0.86 ug/m³ 0.34 ug/m³
6.	Total Fluorides (Gaseous and Particulate) April 15 to October 15	Parts of fluorides per one billion parts of air by volume (Expressed as HF)	2.0 0.8	24 hours 30 days	1.72 ug/m³ 0.69 ug/m³
7.	Total Fluorides (Gaseous and Particulate) October 16 to April 14	Parts of fluorides per one billion parts of air by volume (Expressed as HF)	4.0 1.6	24 hours 30 days	3.44 ug/m³ 1.38 ug/m³
8.	Fluorides in Forage for Consumption by Livestock	Parts of total fluorides per one million parts forage (dry weight)	35	Individual Sample	

Item	Column 1 Name of Contaminant	Column 2 Unit of Measurement	Column 3 Average Amount of Concentration or Total Amount of Contaminant	Column 4 Period of Time	Column 5 Approximate Equivalent at 10°C and 760 mm Hg pressure
9.	Fluoridation (total) April 15 to October 15	Micrograms of total fluorides collected by 100 sq. centimetres of limed filter paper	40	30 days	
10.	Fluoridation (total) October 16 to April 14	Micrograms of total fluorides collected by 100 sq. centimetres of limed filter paper	80	30 days	
11.	Hydrogen Sulphide	Parts of hydrogen sulphide per one million parts of air by volume	0.02	1 hour	30 ug/m³
12.	Lead	Micrograms of lead per cubic metre of air	5.0 2.0 geometric mean	24 hours 30 days	
13.	Mercaptans	Parts of mercaptans per one million parts of air by volume (Expressed as methyl mercaptan)	0.01	1 hour	20 ug/m³
14.	Mercury	Micrograms of mercury per cubic metre of air	2.0	24 hours	
15.	Nickel	Micrograms of Nickel per cubic metre of air	2.0	24 hours	
16.	Nitrogen Dioxide	Parts of nitrogen dioxide per one million parts of air by volume	0.20 0.10	1 hour 24 hours	400 ug/m³ 200 ug/m³
17.	Oxidants (total)	Parts of total oxidants per one million parts of air by volume	0.10	1 hour	
18.	Ozone	Parts of ozone per one million parts of air by volume	0.08	1 hour	165 ug/m³
19.	Soiling	Coefficient of Haze per 1,000 feet of air	1.0 0.5	24 hours 1 year	
20.	Sulphation	Milligrams of sulphur trioxide per 100 sq. cm of exposed lead peroxide per day	0.7	30 days	
21.	Sulphur Dioxide	Parts of sulphur dioxide per one million parts of air by volume	0.25 0.10 0.02	1 hour 24 hours 1 year	690 ug/m³ 275 ug/m³ 55 ug/m³

Item	Column 1 Name of Contaminant	Column 2 Unit of Measurement	Column 3 Average Amount of Concentration or Total Amount of Contaminant	Column 4 Period of Time	Column 5 Approximate Equivalent at 10°C and 760 mm Hg pressure
22.	Suspended Particulate Matter	Micrograms of suspended particulate matter per cubic metre of air	120 60 geometric mean	24 hours 1 year	
23.	Vanadium	Micrograms of vanadium per cubic metre of air	2.0	24 hours	

O. Reg. 872/74, Sched.

REGULATION 17

under The Environmental Protection Act, 1971

SULPHUR CONTENT OF FUELS

INTERPRETATION

1. In this Regulation,

(*a*) "fuel" includes any fuel used for heating, generating steam or electricity, or for industrial processes;

(*b*) "sulphur content" means the amount of sulphur in the fuel as determined by standard methods of sampling and testing and in the case of coal shall be determined as organic sulphur. R.R.O. 1970, Reg. 17, s. 1.

APPLICATION

2. This Regulation applies to The Municipality of Metropolitan Toronto. R.R.O. 1970, Reg. 17, s. 2.

3. Subject to section 4, no person shall use for fuel, or sell or offer for sale, any fuel referred to in column 1 of the Schedule if the sulphur content of the fuel is greater than the maximum sulphur content set opposite thereto,

(*a*) in column 2 of the Schedule, from and including the 1st day of January in the year 1971 to and including the 31st day of December in the year 1971;

(*b*) in column 3 of the Schedule, from and including the 1st day of January in the year 1972 to and including the 31st day of December in the year 1972; and

(*c*) in column 4 of the Schedule, from and including the 1st day of January in the year 1973 to and including the 31st day of December, in the year 1973. R.R.O. 1970, Reg. 17, s. 3.

4. A fuel having a higher sulphur content than the maximum sulphur content prescribed for that fuel in the Schedule may be used for fuel, or sold or offered for sale to a purchaser if the user or purchaser has applied for and obtained a certificate of approval, under section 7 of the Act, for methods or devices that will result in emissions of sulphur dioxide no greater than if the fuel contained the sulphur content prescribed in the Schedule. R.R.O. 1970, Reg. 17, s. 4.

5. Every supplier of fuel,

(*a*) shall report to the Air Management Branch of the Department the sulphur content of the fuels supplied by him; and

(*b*) shall specify to the Air Management Branch of the Department the source or sources of supply of the fuels supplied by him.

at such times and in such manner as the Air Management Branch of the Department specifies. R.R.O. 1970, Reg. 17, s. 5.

6. Every supplier of fuel shall, upon the request of a provincial officer, provide duplicate samples of any fuel supplied by him. R.R.O. 1970, Reg. 17, s. 6.

Schedule

Fuel	Column 1 Grade or type of Fuel	Column 2 Maximum Sulphur Content	Column 3 Maximum Sulphur Content	Column 4 Maximum Sulphur Content
Oil	1	0.5%	0.5%	0.5%
	2	0.5%	0.5%	0.5%
	4	1.5%	1.5%	1.5%
	5	1.9%	1.75%	1.5%
	6B	2.0%	1.75%	1.5%
	6C	2.0%	1.75%	1.5%
Coal	Bituminous	2.0%	1.75%	1.5%

R.R.O. 1970, Reg. 17, Sched.

Amendment to Schedule

THE ENVIRONMENTAL PROTECTION ACT, 1971

O. Reg. 157/73.
Sulphur Content of Fuels.
Made – March 14th, 1973.
Filed – March 22nd, 1973.

REGULATION MADE UNDER THE ENVIRONMENTAL PROTECTION ACT, 1971

1. Section 3 of Regulation 17 of Revised Regulations of Ontario, 1970 is revoked and the following substituted therefor:

3. Subject to section 4, no person shall use for fuel, or sell or offer for sale, any fuel referred to in Column 1 of the Schedule if the sulphur content of the fuel is greater than the maximum sulphur content set opposite thereto in Column 2 of the Schedule. O. Reg. 157/73, s. 1.

2. The Schedule to Regulation 17 of Revised Regulations of Ontario, 1970 is revoked and the following substituted therefor:

Schedule

Fuel	Column 1 Grade or type of Fuel	Column 2 Maximum Sulphur Content
Oil	1	0.5%
	2	0.5%
	4	1.5%
	5	1.5%
	6B	1.5%
	6C	1.5%
Coal	Bituminous	1.5%

O. Reg. 157/73, s. 2.

APPENDIX 3

THE ONTARIO WATER RESOURCES ACT

The Ontario Water Resources Act

Revised Statutes of Ontario, 1970

CHAPTER 332

as amended by

1972, Chapter 1, s. 70; 1973, Chapter 90 and 1974, Chapter 19

JANUARY

1975

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OFFICE CONSOLIDATION

THIS EDITION IS PREPARED FOR PURPOSES OF CONVENIENCE ONLY, AND FOR ACCURATE REFERENCE RECOURSE SHOULD BE HAD TO THE STATUTES.

CHAPTER 332

The Ontario Water Resources Act

1. In this Act, Interpretation

(*a*) "Board" means the Ontario Municipal Board;

(*b*) "borrowings of the Commission" includes all loans raised by the Commission by the issue of debentures or otherwise and all advances from the Province to the Commission;

(*c*) "Commission" means the Ontario Water Resources Commission;

(*ca*) "Crown" means Her Majesty the Queen in right of Ontario;

. . . . .

(*f*) "construction" includes reconstruction, improvement, extension, alteration, replacement and repairs, and "construct" has a corresponding meaning;

(*g*) "cost" means,

(i) in relation to a project under an agreement entered into before the 1st day of April, 1974, the cost thereof as determined by the Minister and includes interest during construction and such engineering fees and other charges and expenses in connection with construction as the Minister may determine, and such proportion of discounts, commissions and other charges and expenses in respect of the issue of debentures by the Crown as the Minister in his discretion may allocate to the project, or

(ii) in relation to a project under an agreement entered into on or after the 1st day of April, 1974, the cost thereof as determined by the Minister and includes such engineering fees and other charges and expenses in connection with construction as

the Minister may determine and such financing costs applicable to the project as the Treasurer may determine and the Minister in his discretion may allocate to the project;

(*h*) "date of completion" of a project means the date that is certified by the Minister as being the date on which the project is completed to the extent necessary to enable the Minister to supply water or to receive, treat and dispose of sewage, as the case may be;

(*i*) "debentures" includes bonds, notes and other securities;

(*ia*) "Director" means a Director appointed under section 8;

(*ib*) "Hearing Board" means the Environmental Hearing Board;

(*j*) "land" includes any estate, term, easement, right or interest in, to, over or affecting land;

(*k*) "Minister" means the Minister of the Environment;

(*ka*) "Ministry" means the Ministry of the Environment;

(*l*) "municipality" means the corporation of a county, metropolitan area, regional area, district area, city, town, village, township or improvement district and includes a local board thereof and a board, commission or other local authority exercising any power with respect to municipal affairs or purposes, including school purposes, in an unorganized township or unsurveyed territory;

(*m*) "owner" means a municipality or person having authority to construct, maintain, operate, repair, improve or extend water works or sewage works;

(*n*) "project" means water works or sewage works provided for in an agreement under section 52;

(*o*) "Province" means the Province of Ontario;

(*p*) "sewage" includes drainage, storm water, commercial wastes and industrial wastes and such other

matter or substance as is specified by regulations made under clause *l* of subsection 1 of section 62;

(*q*) "sewage works" means any works for the collection, transmission, treatment and disposal of sewage, or any part of any such works, but does not include plumbing or other works to which regulations made under clause *f* of subsection 1 of section 62 apply;

(*qa*) "Treasurer" means the Treasurer of Ontario and Minister of Economics and Intergovernmental Affairs;

(*r*) "water works" means any works for the collection, production, treatment, storage, supply and distribution of water, or any part of any such works, but does not include plumbing or other works to which regulations made under clause *f* of subsection 1 of section 62 apply. R.S.O. 1970, c. 332, s. 1; 1972, c. 1, s. 70 (2, 3, 7-11); 1972, c. 1, s. 104 (1); 1973, c. 90, s. 1; 1974, c. 19, s. 1.

ADMINISTRATION

Administration

2. The Minister of the Environment is responsible for the administration of this Act. 1972, c. 1, s. 70 (12), *part*.

THE COMMISSION

Corporation dissolved

3.—(1) The Ontario Water Resources Commission is dissolved.

Enforcement of contracts, etc.

(2) Every contract, negotiable instrument, agreement, security and covenant, and every conveyance, transfer or instrument with respect to any property or any interest therein, given to or received by or for the benefit of the Ontario Water Resources Commission or to which the Ontario Water Resources Commission is a party immediately before this section comes into force,

(*a*) shall enure to the benefit of and be binding upon the Crown; and

(*b*) may be enforced in accordance with the terms thereof as if received by or for the benefit of or entered into with the Crown,

and every reference therein to the Ontario Water Resources Commission shall be deemed to be a reference to the Crown, and the Minister, except with respect to rates

under agreements made under subsection 1*a* of section 17 and subsection 3 of section 52, may exercise every power, right, privilege and discretion therein or with respect thereto that the Commission could have exercised.

Transfer of assets, etc.

(3) All assets and liabilities of the Ontario Water Resources Commission vest in and are binding upon the Crown. 1972, c. 1, s. 70 (12), *part*.

Amendment of reference to Ontario Water Resources Commission

(4) A reference to the Commission in any direction, order, report, approval, notice, permit, licence or document made, given or issued under this Act before this section comes into force shall be deemed to be a reference to a Director, in whom the power to make, give or issue such direction, order, report, approval, notice, permit, licence or document is vested under this Act and who is hereby empowered to exercise any power, right or discretion in any such direction, order, report, approval, notice, permit, licence or document made, given or issued before this section comes into force. 1972, c. 1, s. 70 (12) *part*; 1974, c. 19, s. 3 (1).

Reference in regulation

(5) A reference to the Commission in Regulation 644 of Revised Regulations of Ontario, 1970, shall be deemed to be a reference to a Director.

Idem

(5*a*) A reference to the Commission in Regulation 647 of Revised Regulations of Ontario, 1970, shall be deemed to be a reference to the Minister. 1974, c. 19, s. 3 (2).

Reference in other Acts

(6) A reference in any other Act or in any regulation or document made or issued under or pursuant to any other Act to the Ontario Water Resources Commission shall be deemed to be a reference to the Minister.

Actions or proceedings

(7) A reference to the Ontario Water Resources Commission in any action or proceeding that is commenced before this section comes into force shall be deemed to be a reference to the Crown and the Minister may exercise any right, power, privilege or discretion with respect to the action or proceeding that the Commission could have exercised. 1972, c. 1, s. 70 (12), *part*.

Rates

(8) Every power, right, privilege and discretion with respect to rates under agreements made under subsection 1*a* of section 17 and subsection 3 of section 52 may be exercised by a Director. 1972, c. 1, s. 70 (12), *part*; 1974, c. 19, s. 2 (*c*).

Idem

(9) Any action taken or notice given or hearing held by the Commission immediately before this section comes

into force with respect to any licence, permit, notice, direction, order, report or approval shall be deemed to have been taken, given or held by the Director in whom the power to make, issue or give such licence, permit, notice, direction, order, report or approval is vested under this Act. 1972, c. 1, s. 70 (12), *part*; 1974, c. 19, s. 3 (3).

Evidence

4. A copy of any by-law, resolution or minute of the Commission or of any direction, order, report, approval, notice, permit or licence made or issued by the Commission, certified by the secretary or assistant secretary under the seal of the Commission to be a true copy, shall be received as *prima facie* evidence in any court without further proof. R.S.O. 1970, c. 332, s. 4.

5. REPEALED: 1974, c. 19, s. 4.

6, 7. REPEALED: 1972, c. 1, s. 70 (48).

Appointment of Directors by Minister

8.—(1) The Minister shall appoint in writing such employees of the Ministry as he considers necessary as Directors in respect of such sections of this Act and in respect of such of the regulations or sections thereof as are set out in the appointments.

Limitations

(2) The Minister, in an appointment pursuant to subsection 1, may limit the authority of a Director in such manner as the Minister considers necessary or advisable. 1974, c. 19, s. 5.

Delegation of authority

9. Where under this Act any power, duty or authority is granted to or vested in the Minister, other than the power to expropriate, he may in writing, subject to the approval of the Lieutenant Governor in Council, delegate that power, duty or authority to the Deputy Minister or to any officer or officers of the Ministry, subject to such limitations, restrictions, conditions and requirements as the Minister may set out in the delegation. 1972, c. 1, s. 70 (13), *part*.

Environmental Hearing Board established

9*a*.—(1) A board to be known as the Environmental Hearing Board is established and shall be composed of not fewer than five and not more than eleven persons as the Lieutenant Governor in Council from time to time may determine.

Appointment of members and designation of chairman and vice-chairman

(2) The Lieutenant Governor in Council shall,

(*a*) appoint the members of the Hearing Board, none of whom shall be members of the public service in the employ of the Ministry; and

(*b*) designate one of the members as chairman and another member as vice-chairman.

Where chairman absent

(3) In the case of the absence or inability of the chairman to act or of there being a vacancy in the office of chairman, the vice-chairman shall act as and have all the powers of the chairman and, in the absence of the chairman and vice-chairman from any meeting of the Hearing Board, the other members shall appoint an acting chairman who shall act as and have all the powers of the chairman.

Term of office

(4) Members of the Hearing Board shall hold office during pleasure.

Quorum

(5) Three members of the Hearing Board constitute a quorum.

Appointment of staff
R.S.O. 1970, c. 386

(6) Such employees as are required for the purposes of the Hearing Board may be appointed under *The Public Service Act*.

Remuneration

(7) The members of the Hearing Board shall be paid such remuneration as the Lieutenant Governor in Council may determine.

Execution of powers

(8) The powers of the Hearing Board shall be exercised by resolution.

Resolutions

(9) The Hearing Board may pass resolutions governing the proceedings and the calling of meetings and hearings of the Hearing Board, specifying the powers and duties of employees of the Hearing Board and generally dealing with the carrying out of its function. 1972, c. 1, s. 70 (13), *part*.

When Hearing Board to hold hearing

(10) Where a Director is required or permitted to hold a hearing or considers a hearing necessary or advisable under this Act, he may by a notice in writing and on such terms and conditions as he may direct, require the Hearing Board to hold the hearing. 1972, c. 1, s. 70 (13), *part*; 1974, c. 19, s. 2 (*d*).

When Hearing Board to hold public hearing

(11) Upon receipt of notice from a Director referred to in subsection 10, the Hearing Board shall hold a public hearing with respect to the subject-matter of the notice and shall report thereon to the Director. 1974, c. 19, s. 6.

Contents of report

(12) The report of the Hearing Board shall contain a summary of the information presented and the views expressed at the hearing and its opinion on the merits of

the subject-matter of the hearing in light of such information and views together with its reasons therefor.

One or more members may conduct hearing

(13) The chairman may authorize one or more members of the Hearing Board to conduct a hearing and, except where a quorum of the Hearing Board conducts the hearing, to report to the Hearing Board and such member or members shall have all the powers of the Hearing Board for the purposes of the hearing. 1972, c. 1, s. 70 (13), *part*.

Hearings commenced by Commission

(14) On the direction in writing of a Director, where the Commission, immediately before this section comes into force, proposed to hold or commenced but did not complete a hearing, the hearing shall be held or continued by the Hearing Board and any action or notice taken or given by the Commission shall be deemed to have been taken or given by the Hearing Board. 1972, c. 1, s. 70 (13), *part*; 1974, c. 19, s. 2 (*d*).

Inspection

(15) For purposes relevant to the subject-matter of a public hearing, the Hearing Board and its employees may enter and inspect any land or premises at any reasonable time. 1972, c. 1, s. 70 (13), *part*.

10. REPEALED: 1972, c. 1, s. 70 (48).

11. REPEALED: 1973, c. 90, s. 2.

12, 13. REPEALED: 1974, c. 19, s. 7.

14. - 16. REPEALED: 1972, c. 1, s. 70 (48).

Function

17.—(1) Notwithstanding any other Act, it is the function of the Minister and he has power,

. . . . .

(*b*) to construct, acquire, provide, operate and maintain water works and to develop and make available supplies of water to municipalities and persons;

(*c*) to construct, acquire, provide, operate and maintain sewage works and to receive, treat and dispose of sewage delivered by municipalities and persons;

. . . . .

(*e*) to conduct research programs and to prepare statistics for his purposes;

(*f*) to disseminate information and advice with respect to the collection, production, transmission, treatment, storage, supply and distribution of water or sewage; and

(*g*) to perform such functions or discharge such duties as may be assigned to him from time to time by the Lieutenant Governor in Council. R.S.O. 1970, c. 332, s. 17 (1); 1972, c. 1, s. 70 (2, 15); 1974, c. 19, s. 8.

Idem

(1*a*) Notwithstanding any other Act, the Crown, represented by the Minister, may make agreements with any one or more municipalities or persons with respect to a supply of water or the reception, treatment and disposal of sewage. 1972, c. 1, s. 70 (16), *part*.

Power of Director

(1*b*) Notwithstanding any other Act, it is the function of a Director and he has power to control and regulate the collection, production, treatment, storage, transmission, distribution and use of water for public purposes and to make orders with respect thereto. 1972, c. 1, s. 70 (16), *part*; 1974, c. 19, s. 2 (*a*).

Offence

(2) Every person who contravenes any order made under subsection 1*b* is guilty of an offence and on summary conviction is liable to a fine of not more than $100 for every day or part thereof during which such contravention continues. R.S.O. 1970, c. 332, s. 17 (2); 1972, c. 1, s. 70 (17).

Agreements under s. 17

18. Any municipality may enter into agreements with the Crown under subsection 1*a* of section 17, and subsections 4 to 8 of section 52, section 54 and subsection 5 of section 56 apply *mutatis mutandis* to such agreements. R.S.O. 1970, c. 332, s. 18; 1972, c. 1, s. 70 (3, 18).

Municipal powers

19. The Minister may for his purposes exercise any or all of the powers that are conferred by any general Act upon a municipality respecting the establishment, construction, maintenance or operation of water works or sewage works. R.S.O. 1970, c. 332, s. 19; 1972, c. 1, s. 70 (2).

Inspection of premises, etc.

20.—(1) The Minister and his employees and agents may at any time for his purposes, without consent and without compensation, enter into the lands or buildings of the Province or of any municipality or of any person, or into any highway or road under the jurisdiction and control of any public authority, or into any boat or ship to which the regulations under clause *n* of subsection 1 of

section 62 apply, and may make such surveys, examinations, investigations, inspections or other arrangements as he considers necessary. R.S.O. 1970, c. 332, s. 20 (1); 1972, c. 1, s. 70 (2); 1974, c. 19, s. 9.

Right to lay and maintain pipes under roads

(2) The Minister and his employees and agents may for his purposes, without consent and without compensation, lay, maintain, repair, alter or replace such pipes and appurtenances thereto as he considers necessary in, upon, through, over and under any highway or road under the jurisdiction and control of any public authority. R.S.O. 1970, c. 332, s. 20 (2); 1972, c. 1, s. 70 (2).

Land, etc., to be restored

(3) Lands, buildings, highways or roads disturbed by the exercise of any of the powers mentioned in subsection 1 or 2 shall be restored to their original condition without unnecessary delay. R.S.O. 1970, c. 332, s. 20 (3).

Offence

(4) Every person who hinders or obstructs any employee or agent of the Minister in the exercise of his powers or the performance of his duties under subsection 1 is guilty of an offence and on summary conviction is liable to a fine of not more than $200 for every day upon which the offence is committed or continues. R.S.O. 1970, c. 332, s. 20 (4); 1972, c. 1, s. 70 (2).

Acquisition of land, etc.

21.—(1) The Minister, for and on behalf of the Crown, may for the purposes of this Act, acquire by purchase, lease or otherwise or, without the consent of the owner, enter upon, take possession of, expropriate and use land and may use the waters of any lake, river, pond, spring or stream as may be considered necessary for his purposes, and, upon such terms as he considers proper, may sell, lease or dispose of any land that in his opinion is not necessary for his purposes. R.S.O. 1970, c. 332, s. 21 (1); 1972, c. 1, s. 70 (2, 19).

Expropriation

1973, c. 2

(2) The Minister in the exercise of his powers to take such land compulsorily has all the powers conferred by *The Ministry of Government Services Act, 1973* on the Minister of Government Services in relation to a public work, and in the application of this section where the words "the Minister", "the Ministry" or "the Crown" appear in such Act they, where the context permits, mean the Minister, and the taking of such land by the Minister shall be deemed to be for the public purposes of Ontario. R.S.O. 1970, c. 332, s. 21 (2); 1972, c. 1, ss. 1, 70 (2), 74 (1, 3); 1973, c. 2, s. 2.

Procedure

(3) The Minister shall proceed in the manner provided by *The Ministry of Government Services Act, 1973* where the

R.S.O. 1970, c. 154

Minister of Government Services enters upon, takes or uses land for the public purposes of Ontario and *The Expropriations Act* applies. R.S.O. 1970, c. 332, s. 21 (3); 1972, c. 1, ss. 70 (2), 74 (1, 3); 1973, c. 2, s. 2.

Interpretation

(4) For the purpose of this section, "owner" has the same meaning as in *The Ministry of Government Services Act, 1973*. R.S.O. 1970, c. 332, s. 21 (4); 1972, c. 1, s. 74 (1, 3); 1973, c. 2, s. 2.

Application of 1973, c. 2 to property acquired for water or sewage service

22. Subject to section 21, *The Ministry of Government Services Act, 1973* does not apply to real or personal property of the Crown acquired for the purpose of a project or for the provision of water or sewage service by the Minister as defined in section 61. R.S.O. 1970, c. 332, s. 22; 1972, c. 1, ss. 70 (2, 3), 74 (1); 1973, c. 2, s. 2.

Instruments creating rights analogous to easements

23. (1) A right or interest in, over, above, upon, across, along, through, under or affecting any land or any covenant or condition relating thereto, in respect of water or sewage works, in favour of the Crown or any municipality having a contract with the Crown in respect of water or sewage works is valid and enforceable in accordance with the terms of the instrument granting, creating or containing them, notwithstanding that the right or interest or the benefit of the covenant or condition is not appurtenant or annexed to or for the benefit of any land of the Crown or the municipality. R.S.O. 1970, c. 332, s. 23 (1); 1972, c. 1, s. 70 (3).

Terms of instrument binding on successors

(2) On and after the registration of an instrument to which subsection 1 applies in the proper registry or land titles office, all the rights, interests, covenants and conditions granted or created by or contained in the instrument are binding upon and enure to the benefit of the heirs, successors, personal representatives and assigns of the parties to the instrument.

Liability of grantor for breach of covenant limited

(3) A party to an instrument to which subsection 1 applies or a person to whom subsection 2 applies is not liable for breach of a covenant or condition contained in the instrument committed after he ceased to be the owner of the land therein mentioned, or after he ceased to hold the interest in the land by virtue of which he or his predecessor in title executed the instrument.

Land to remain subject to instrument when sold for taxes

(4) Where the land mentioned in an instrument to which subsection 1 applies is sold for taxes, the land shall be deemed to have been sold subject to any right or interest granted or created by and any condition or covenant contained in the instrument.

(5) This section applies to rights, interests, covenants and conditions granted or created by or contained in any instrument of the type mentioned in subsection 1, executed after the 28th day of March, 1956. R.S.O. 1970, c. 332, s. 23 (2-5). Application

24, 25. REPEALED: 1974, c. 19, s. 10.

26. REPEALED: 1974, c. 19, s. 11.

27. REPEALED: 1974, c. 19, s. 12.

28, 29. REPEALED: 1972, c. 1, s. 70 (48).

WATER

30. Under sections 31, 32, 34 and 36 the quality of water shall be deemed to be impaired if, notwithstanding that the quality of the water is not or may not become impaired, the material deposited or discharged or caused or permitted to be deposited or discharged or any derivative of such material causes or may cause injury to any person, animal, bird or other living thing as a result of the use or consumption of any plant, fish or other living matter or thing in the water or in the soil in contact with the water. R.S.O. 1970, c. 332, s. 30. Where quality of water deemed to be impaired

31.—(1) For the purposes of this Act, the Minister has the supervision of all surface waters and ground waters in Ontario. R.S.O. 1970, c. 332, s. 31 (1); 1972, c. 1, s. 70 (2). Supervision of waters

(2) The Minister may examine any surface waters or ground waters in Ontario from time to time to determine what, if any, pollution exists and the causes thereof. R.S.O. 1970, c. 332, s. 31 (2); 1972, c. 1, s. 70 (2). Examination for pollution

(3) Where any person is discharging or depositing or causing or permitting the discharge or deposit of any material of any kind into or in or near any well, lake, river, pond, spring, stream, reservoir or other body of water or watercourse that, in the opinion of the Minister, may impair the quality of the water in such well, lake, river, pond, spring, stream, reservoir or other body of water or watercourse, the Minister may apply *ex parte* to a judge of the Supreme Court or of the county or district court of the county or district in which the material is being discharged or deposited for an order prohibiting such discharge or deposit for such period not exceeding twenty-one days and on such terms and conditions as the judge considers proper, and such order may, on application to a judge Injunction to prevent pollution of water

of the Supreme Court or of the county or district court of the county or district in which the material is being discharged or deposited, be continued for such period and on such terms and conditions as the judge considers proper. R.S.O. 1970, c. 332, s. 31 (3); 1972, c. 1, s. 70 (2).

Discharge of polluting material prohibited

32.—(1) Every municipality or person that discharges or deposits or causes or permits the discharge or deposit of any material of any kind into or in any well, lake, river, pond, spring, stream, reservoir or other water or watercourse or on any shore or bank thereof or into or in any place that may impair the quality of the water of any well, lake, river, pond, spring, stream, reservoir or other water or watercourse is guilty of an offence and on summary conviction is liable on first conviction to a fine of not more than $5,000 and on each subsequent conviction to a fine of not more than $10,000 or to imprisonment for a term of not more than one year, or to both such fine and imprisonment.

Separate offences

(2) Each day that a municipality or person contravenes subsection 1 constitutes a separate offence. R.S.O. 1970, c. 332, s. 32 (1, 2).

Minister to be notified when polluting material is discharged, deposited or escapes

(3) Every municipality or person that discharges or deposits or causes or permits the discharge or deposit of any material of any kind, and such discharge or deposit is not in the normal course of events, or from whose control material of any kind escapes into or in any well, lake, river, pond, spring, stream, reservoir or other water or watercourse or on any shore or bank thereof or into or in any place that may impair the quality of the water of any well, lake, river, pond, spring, stream, reservoir or other water or watercourse, shall forthwith notify the Minister of the discharge, deposit or escape, as the case may be. R.S.O. 1970, c. 332, s. 32 (3); 1972, c. 1, s. 70 (2).

Offence

(4) Every municipality or person that fails to notify the Minister as provided in subsection 3 is guilty of an offence and on summary conviction is liable to a fine of not more than $5,000. R.S.O. 1970, c. 332, s. 32 (4); 1972, c. 1, s. 70 (2).

Where subs. 1 does not apply

(5) The discharge into any lake, river, stream or other water or watercourse of sewage from sewage works that have been constructed and are operated in accordance with the approval of the former Department of Health, the Commission or the Executive Director, Water Supply and Pollution Control, of the Ministry or a Director or in conformity with any order of the Board is not a contravention of subsection 1. R.S.O. 1970, c. 332, s. 32 (5); 1972, c. 1, s. 70 (22); 1974, c. 19, s. 13.

Prohibiting or regulating discharge of sewage

33.—(1) A Director may by order prohibit or regulate the discharge or deposit by any municipality or person of any sewage into or in any well, lake, river, pond, spring, stream, reservoir or other water or watercourse, and any such order may be amended, varied or revoked by the Director as he considers desirable. R.S.O. 1970, c. 332, s. 33 (1); 1972, c. 1, s. 70 (23); 1974, c. 19, s. 2 (*a*).

Offence

(2) Every municipality or person that contravenes an order made under subsection 1 is guilty of an offence and on summary conviction is liable on first conviction to a fine of not more than $5,000 and on each subsequent conviction to a fine of not more than $10,000.

Separate offences

(3) Each day that a municipality or person contravenes an order made under subsection 1 constitutes a separate offence. R.S.O. 1970, c. 332, s. 33 (2, 3).

Equipment, etc., to alleviate effects of impairment of quality of water

34.—(1) Where, in the opinion of a Director it is in the public interest to do so, the Director may by order require any municipality or industrial or commercial enterprise to have on hand and available at all times such equipment, chemicals and other materials as the order specifies to alleviate the effects of any impairment of the quality of water that may be caused by the municipality or industrial or commercial enterprise. R.S.O. 1970, c. 332, s. 34 (1); 1974, c. 19, s. 2 (*a*).

Offence

(2) Every municipality or industrial or commercial enterprise that contravenes an order of a Director made under subsection 1 is guilty of an offence and on summary conviction is liable to a fine of not more than $500 for every day the contravention continues. R.S.O. 1970, c. 332, s. 34 (2); 1974, c. 19, s. 2 (*a*).

35. REPEALED: 1972, c. 1, s. 70 (24).

Area defined for protection of public water supply

36.—(1) An area may be defined by a Director that includes a source of public water supply,

(*a*) wherein no person shall swim or bathe; or

(*b*) wherein no material of any kind that may impair the quality of water therein shall be placed, deposited, discharged or allowed to remain; or

(*c*) wherein no act shall be done and no water shall be taken that may unduly diminish the amount of water available in such area as a public water supply,

and thereupon the municipality or person who has a right to use the water from such source for the purpose of a public water supply shall give notice of the area so defined by publication, posting or otherwise as the Director considers necessary for the protection of the source of public water supply. 1974, c. 19, s. 14.

Offences

(2) Every person,

(*a*) who swims or bathes within an area defined under clause *a* of subsection 1; or

(*b*) who places, deposits, discharges or allows to remain within an area defined under clause *b* of subsection 1 any material of any kind that may impair the quality of the water therein; or

(*c*) who does any act or takes water within an area defined under clause *c* of subsection 1 so that the amount of water available within the area as a public water supply may be unduly diminished,

is guilty of an offence and on summary conviction is liable to a fine of not more than $1,000 or to imprisonment for a term of not more than one year, or to both.

Application

(3) Subsection 2 does not apply where the act or taking of water that may unduly diminish the amount of water available as a public water supply within an area defined under subsection 1 was commenced before the notice of the area is given as required under subsection 1. R.S.O. 1970, c. 332, s. 36 (2, 3).

Interpretation

37.—(1) In this section, reference to the taking of water for use for domestic or farm purposes means the taking of water by any person other than a municipality or a company public utility for ordinary household purposes or for the watering of livestock, poultry, home gardens or lawns, but does not include the watering or irrigation of crops grown for sale.

Idem

(2) In subsection 4, the reference to the taking of water for the watering of livestock or poultry does not include the taking of surface water into storage for the watering of livestock or poultry. R.S.O. 1970, c. 332, s. 37 (1, 2).

Taking of water regulated

(3) Notwithstanding any general or special Act or any regulation or order made thereunder and subject to subsection 5, no person shall take more than a total of 10,000 gallons of water in a day,

(*a*) by means of a well or wells that are constructed or deepened after the 29th day of March, 1961; or

(*b*) by means of an inlet or inlets from a surface source of supply, where the inlet or inlets is or are installed in the source of supply or is or are enlarged after the 29th day of March, 1961; or

(*c*) by means of a structure or works constructed after the 29th day of March, 1961 for the diversion or storage of water; or

(*d*) by any combination of the means referred to in clauses *a*, *b* and *c*,

without a permit issued by a Director. R.S.O. 1970, c. 332, s. 37 (3); 1974, c. 19, s. 2 (*b*).

Where taking of water interferes with other person's interest in water

(4) Notwithstanding any general or special Act or any regulation or order made thereunder, where the taking of water for any purpose, other than the taking of water by any person except a municipality or company public utility for use for ordinary household purposes or for the watering of livestock or poultry and other than the taking of water by any person for fire fighting, interferes, in the opinion of a Director, with any public or private interest in any water, the Director may, by notice served on or sent by registered mail to the person who is taking or is responsible for the taking of water that so interferes, prohibit the person from so taking water without a permit issued by the Director. R.S.O. 1970, c. 332, s. 37 (4); 1974, c. 19, s. 2 (*b*).

Application to domestic and farm use

(5) Subsection 3 does not apply to the taking of water by any person for use for domestic or farm purposes or for fire fighting. R.S.O. 1970, c. 332, s. 37 (5).

Permit

(6) A Director may in his discretion issue, refuse to issue or cancel a permit, may impose such terms and conditions in issuing a permit as he considers proper and may alter the terms and conditions of a permit after it is issued. R.S.O. 1970, c. 332, s. 37 (6); 1974, c. 19, s. 2 (*b*).

Flowing or leaking of water from well, etc., regulated

(7) Where the flowing or leaking of water from a well, or the diversion, flowing or release of water from or by means of a hole or excavation made in the ground for any purpose other than the taking of water, interferes, in the opinion of a Director, with any public or private interest in any water, the Director may, by notice served on or sent to the person who constructed or made such well, hole or excavation or to the registered owner of the land in which such well, hole or excavation is located, require the person or owner to stop

or regulate such flowing, leaking, diversion or release of water in such manner and within such time as the Director may direct, or require such person or owner to take such measures in relation to such flowing, leaking, diversion or release of water as the notice may require. R.S.O. 1970, c. 332, s. 37 (7); 1974, c. 19, s. 2 (*b*).

Offences

(8) Every person who contravenes,

(*a*) subsection 3 or 4; or

(*b*) a notice served on him or received by him or on his behalf under subsection 4 or 7; or

(*c*) any of the terms and conditions of a permit issued by a Director,

is guilty of an offence and on summary conviction is liable to a fine of not more than $200 for every day the contravention continues. R.S.O. 1970, c. 332, s. 37 (8); 1974, c. 19, s. 2 (*b*); 1974, c. 19, s. 15.

38. REPEALED: 1973, c. 90, s. 3.

Drilling and boring of wells, etc., prohibited in certain areas

39.—(1) No person shall make a well or hole in the ground for the purpose of obtaining water, except by digging, in any area designated by the regulations made under this Act, without a permit issued by a Director. R.S.O. 1970, c. 332, s. 39 (1); 1974, c. 19, s. 2 (*b*).

Permit

(2) A Director may in his discretion issue, refuse to issue, or cancel a permit, may impose such terms and conditions in issuing a permit as he considers proper and may alter the terms and conditions of a permit after it is issued. R.S.O. 1970, c. 332, s. 39 (2); 1974, c. 19, s. 2 (*b*).

Offence

(3) Every person who contravenes subsection 1 or any of the terms and conditions of a permit issued by a Director is guilty of an offence and on summary conviction is liable to a fine of not more than $50. R.S.O. 1970, c. 332, s. 39 (3); 1974, c. 19, s. 2 (*b*).

WATER WELL DRILLERS

Licences

40.—(1) No person shall carry on the business of boring or drilling wells for water unless he is the holder of a licence therefor from a Director. R.S.O. 1970, c. 332, s. 40 (1); 1974, c. 19, s. 2 (*b*).

Issue and renewal of licences

(2) Upon application therefor in the prescribed form and upon payment of the prescribed fee, a Director may issue or renew, as the case may be, a licence to any person to carry on the business of boring or drilling wells for water. R.S.O. 1970, c. 332, s. 40 (2); 1974, c. 19, s. 2 (*b*).

Expiry

(3) Every such licence and renewal thereof expires on the 31st day of December following the date of issue or renewal. R.S.O. 1970, c. 332, s. 40 (3).

Suspension and cancellation

(4) A Director may suspend or cancel a licence at any time. R.S.O. 1970, c. 332, s. 40 (4); 1974, c. 19, s. 2 (*b*).

Returns

(5) Every licensee shall, within one month after the completion of the boring or drilling of a well for water, make a return to a Director in the prescribed form. R.S.O. 1970, c. 332, s. 40 (5); 1974, c. 19, s. 2 (*b*).

Offence

(6) Every person who contravenes a provision of this section is guilty of an offence and on summary conviction is liable to a fine of not less than $10 and not more than $100. R.S.O. 1970, c. 332, s. 40 (6).

WATER WORKS

Plans for water works to be submitted to Director

41.—(1) When any municipality or any person contemplates the establishment of any water works, or the extension of or any change in any existing water works, the plans, specifications and an engineer's report of the water supply and the works to be undertaken, together with such other information as a Director may require, shall be submitted to the Director, and no such works shall be undertaken or proceeded with and no by-law for raising money to finance such works shall be passed until the source of water supply and the proposed works have been approved by the Director. R.S.O. 1970, c. 332, s. 41 (1); 1974, c. 19, s. 2 (*a*).

Offence

(2) Every municipality that or person who contravenes any provision of subsection 1 is guilty of an offence and on summary conviction is liable to a fine of not more than $2,000. R.S.O. 1970, c. 332, s. 41 (2).

Powers of Director, where water works undertaken without approval

(3) Where any person undertakes or proceeds with the establishment of any water works, or the extension of or change in any existing water works, without having first obtained the approval of a Director, a Director may order the person or his successor or assignee to afford at his own expense such facilities as the Director considers necessary for the investigation of the works and the

source of water supply and may direct such changes to be made in the source of water supply and in the works as the Director considers necessary, and any changes directed by the Director to be made in the works shall be carried out by the person or his successor or assignee at his own expense. 1974, c. 19, s. 16.

Director may refuse or qualify approval

(4) Where in the opinion of a Director it is in the public interest to do so, the Director may refuse to grant his approval or grant his approval on such terms and conditions as he considers necessary. R.S.O. 1970, c. 332, s. 41 (4); 1974, c. 19, s. 2 (*a*).

Offence

(5) Every person, except a municipality, who,

(*a*) fails to comply with any direction or order given or made by a Director under subsection 3; or

(*b*) contravenes any of the terms and conditions of the approval granted by a Director under subsection 4,

is guilty of an offence and on summary conviction is liable to a fine of $500 for every day upon which such default or contravention continues. R.S.O. 1970, c. 332, s. 41 (5); 1974, c. 19, s. 2 (*a*).

Returns from water works

(6) The owner of water works shall whenever required by a Director make returns to the Director, of such matters as may be required by the Director, and any such owner who, for the space of thirty days after being so required, fails or neglects to make the returns required is guilty of an offence and on summary conviction is liable to a fine of not more than $100. R.S.O. 1970, c. 332, s. 41 (6); 1974, c. 19, s. 2 (*a*).

Water works to be kept in repair

(7) Water works shall at all times be maintained, kept in repair and operated in such manner and with such facilities as may be directed from time to time by a Director. R.S.O. 1970, c. 332, s. 41 (7); 1974, c. 19, s. 2 (*a*).

Offence

(8) Every person, except a municipality, who fails to comply with any direction given by a Director under subsection 7 is guilty of an offence and on summary conviction is liable to a fine of $500 for every day upon which such default continues. R.S.O. 1970, c. 332, s. 41 (8); 1974, c. 19, s. 2 (*a*).

Application

(9) Subsections 1 and 3 do not apply,

(a) to a water works to be used only for supplying water, for agricultural, commercial or industrial purposes, that is not required under any Act or regulation to be fit for human consumption;

(b) to a water works not capable of supplying water at a rate greater than 10,000 gallons per day;

(c) to a privately-owned water works to be used to supply water only for five or fewer private residences; and

(d) to such water works as may be exempted therefrom by regulations made under this Act. R.S.O. 1970, c. 332, s. 41 (9).

SEWAGE WORKS

Plans for sewage works to be submitted to Director

42.—(1) When any municipality or any person contemplates the establishment of any sewage works, or the extension of or any change in any existing sewage works, the plans, specifications and an engineer's report of the works to be undertaken, and the location of the discharge of effluent, together with such information as a Director may require, shall be submitted to the Director, and no such works shall be undertaken or proceeded with and no by-law for raising money to finance such works shall be passed until the proposed works have been approved by the Director. R.S.O. 1970, c. 332, s. 42 (1); 1974, c. 19, s. 2 (*a*).

Offence

(2) Every municipality that or person who contravenes any provision of subsection 1 is guilty of an offence and on summary conviction is liable to a fine of not more than $2,000. R.S.O. 1970, c. 332, s. 42 (2).

Powers of Director, where sewage works undertaken without approval

(3) Where any person undertakes or proceeds with the establishment of any sewage works, or the extension of or any change in any existing sewage works, without having first obtained the approval of a Director, a Director may order the person or his successor or assignee to afford at his own expense such facilities as the Director considers necessary for the investigation of the works and the location of the discharge of effluent and may direct such changes to be made in the location of the discharge of effluent and in the works as the Director considers necessary, and any changes directed by the Director to be made in the works shall be carried out by the person or his successor or assignee at his own expense. 1974, c. 19, s. 17.

Director may refuse or qualify approval

(4) Where in the opinion of a Director it is in the public interest to do so, the Director may refuse to grant his approval or grant his approval on such terms and conditions as he considers necessary. R.S.O. 1970, c. 332, s. 42 (4); 1974, c. 19, s. 2 (*a*).

Offence

(5) Every person, except a municipality, who,

(a) fails to comply with any direction or order given or made by a Director under subsection 3; or

(b) contravenes any of the terms and conditions of the approval granted by a Director under subsection 4,

is guilty of an offence and on summary conviction is liable to a fine of $500 for every day upon which such default or contravention continues. R.S.O. 1970, c. 332, s. 42 (5); 1974, c. 19, s. 2 (*a*).

Application

(6) This section does not apply,

(a) to a sewage works from which sewage is not to drain or be discharged directly or indirectly into a ditch, drain or storm sewer or a well, lake, river, pond, spring, stream, reservoir or other water or watercourse;

(b) to a privately-owned sewage works designed for the partial treatment of sewage that is to drain or be discharged into a sanitary sewer;

(c) to a privately-owned sewage works serving only five or fewer private residences;

(d) to a sewage works the main purpose of which is to drain agricultural lands;

R.S.O. 1970, cc. 136, 57, 201

(e) to a drainage works under *The Drainage Act*, *The Cemeteries Act*, *The Public Transportation and Highway Improvement Act* or *The Railways Act*;

R.S.O. 1950, c. 131

(f) to such sewage works as may be exempted therefrom by regulations made under this Act,

but this section does apply to a sewage works for the distribution of sewage on the surface of the ground for the purpose of disposing of the sewage. R.S.O. 1970, c. 332, s. 42 (6); 1971, c. 61, s. 1.

Establishment or extension of sewage works in or into another municipality, etc.

43.—(1) Where any municipality contemplates establishing or extending its sewage works in or into another municipality or territory without municipal organization, a Director shall, before giving his approval under section 42, hold a public hearing and give at least ten days notice of the hearing to the clerk of the municipality in or into which the sewage works are being established or extended and to the clerks of such other municipalities and to such other persons and in such manner as the Director may direct. R.S.O. 1970, c. 332, s. 43 (1); 1974, c. 19, s. 2 (*a*).

(2) REPEALED: 1972, c. 1, s. 70 (26).

Powers of municipality after approval

(3) Where a Director has given his approval under section 42 to an establishment or extension under subsection 1, the municipality undertaking the establishment or extension may enter upon, take and use such lands in such other municipality or municipalities or territory without municipal organization as may be necessary, and for that purpose has the same powers within such municipality or municipalities or territory as it has within its own municipality, and paragraph 84 of subsection 1 of section 354 of *The Municipal Act* does not apply. R.S.O. 1970, c. 332, s. 43 (3); 1974, c. 19, s. 2 (*a*). R.S.O. 1970, c. 284

Director may vary approval

(4) A Director may amend or vary any approval given under section 42 to an establishment or extension under subsection 1, but before so acting the Director shall comply with the requirements of subsection 1 with respect to the holding of a public hearing and the giving of notice thereof. R.S.O. 1970, c. 332, s. 43 (4); 1974, c. 19, s. 2 (*a*).

Application to Board

(5) Where a Director has given his approval under section 42 to an establishment or extension under subsection 1, the municipality undertaking the establishment or extension, before proceeding therewith, may apply to the Board for an order,

(*a*) stopping up and closing any highway, road or road allowance, temporarily or permanently, for the purpose of allowing the establishment or extension to be carried on and vesting it in the municipality undertaking the establishment or extension, and providing for the opening of another highway, road or road allowance in lieu of the highway, road or road allowance so stopped up and closed, and subsection 2 of section 86 of *The Registry Act* does not apply; R.S.O. 1970, c. 409

(*b*) ordering that any building restrictions, covenants running with the land or any limitations placed upon the estate or interest of any person in any lands upon or through which it is proposed that the establishment or extension may be constructed shall be terminated and shall be no longer operative or binding upon or against any person, and directing that any such order be registered under *The Registry Act*; and R.S.O. 1970, c. 409

(*c*) fixing the compensation for lands taken or injuriously affected in the construction, maintenance or operation of the establishment or extension,

and notice of the application shall be given to the clerk of the municipality in or into which the sewage works are being established or extended and to the clerks of such other municipalities and to such other persons and in such manner as the Board may direct. R.S.O. 1970, c. 332, s. 43 (5); 1974, c. 19, s. 2 (*a*).

Registration of order

(6) The registration of an order under clause *b* of subsection 5 is a bar to any action or proceeding taken by any person claiming any right or benefit under or by reason of any such restrictions, covenants, interests, estate or title in the lands described in the order.

Agreements as to use

(7) Where sewage works of a municipality are established or extended in or into another municipality, the municipality in or into which the sewage works are established or extended may make an agreement with the owner of the sewage works for the connecting with and the use of the sewage works.

Application by municipality

(8) Where a municipality in or into which sewage works are established or extended is unable to make an agreement under subsection 7, the Board, upon an application authorized by by-law of its council, may confer the right to make use of the sewage works upon the applicant municipality and the inhabitants thereof whose properties may be conveniently served by the sewage works, and prescribe the terms and conditions of such use.

Municipality may collect as taxes amounts agreed or ordered to be paid

(9) Where an agreement is made under subsection 7 or an order is made under subsection 8, the municipality in or into which the sewage works are established or extended may assess, levy and collect as taxes the amounts to be paid under the agreement or order in the same manner and to the same extent as if the municipality itself were

proposing to construct, were constructing or had constructed the works or were operating and maintaining the works.

Application of subss. 1, 2, 4 to person

(10) Subsections 1, 2 and 4 apply *mutatis mutandis* to a person who contemplates extending his sewage works from one municipality into another municipality or into territory without municipal organization. R.S.O. 1970, c. 332, s. 43 (6-10).

Application to Board

(11) Where a Director has given his approval under section 42 to an extension by a person of his sewage works from one municipality into another municipality or into territory without municipal organization the Board may, on application made by the person undertaking the extension, order the amendment of any by-law passed under paragraph 116 of subsection 1 of section 354 of *The Municipal Act* or any by-law passed under section 35 of *The Planning Act* or any official plan to permit the use of the land for the extension. R.S.O. 1970, c. 332, s. 43 (11); 1974, c. 19, s. 2 (*a*).

R.S.O. 1970, cc. 284, 349

Powers of Board

(12) The Board, as a condition of making an order under subsection 11, may impose such restrictions, limitations and conditions respecting the use of land for the extension of the sewage works, not inconsistent with the terms and conditions of the approval of a Director given under section 42, as to the Board may appear necessary or expedient. R.S.O. 1970, c. 332, s. 43 (12); 1974, c. 19, s. 2 (*a*).

Establishment or extension within a municipality of sewage treatment works

44.—(1) Where, in any municipality, the municipality or a person contemplates establishing or extending a sewage treatment works within the municipality, a Director may, before giving his approval under section 42, hold a public hearing, in which case the Director shall give at least ten days notice of the hearing to the clerk of the municipality and to such other persons and in such manner as the Director may direct. R.S.O. 1970, c. 332, s. 44 (1); 1974, c. 19, s. 2 (*a*).

(2) REPEALED: 1972, c. 1, s. 70 (27).

Director may vary approval

(3) A Director may amend or vary any approval given under section 42 to an establishment or extension under subsection 1 and, before so acting, the Director may hold a public hearing, in which case he shall give notice thereof in accordance with subsection 1. R.S.O. 1970, c. 332, s. 44 (3); 1974, c. 19, s. 2 (*a*).

Application to Board

(4) Where a Director has given his approval under section 42 to an establishment or extension by a person of sewage treatment works within a municipality the Board may, on application by the person undertaking the establishment or extension, order the amendment of any by-law passed under paragraph 116 of subsection 1 of section 354 of *The Municipal Act* or any by-law passed under section 35 of *The Planning Act* or any official plan to permit the use of land for the establishment or extension. R.S.O. 1970, c. 332, s. 44 (4); 1974, c. 19, s. 2 (*a*).

R.S.O. 1970, cc. 284, 349

Powers of Board

(5) The Board, as a condition of making an order under subsection 4, may impose such restrictions, limitations and conditions respecting the use of land for the establishment or extension of the sewage treatment works not inconsistent with the terms and conditions of the approval of a Director given under section 42, as to the Board may appear necessary or expedient. R.S.O. 1970, c. 332, s. 44 (5); 1974, c. 19, s. 2 (*a*).

Application of s. 43, subss. 11, 12, and s. 44, subss. 4, 5, to municipality

45. Subsections 11 and 12 of section 43 and subsections 4 and 5 of section 44 apply *mutatis mutandis* to a municipality that has obtained the approval of a Director to the establishment or extension of its sewage works or to the establishment or extension of sewage treatment works. R.S.O. 1970, c. 332, s. 45; 1974, c. 19, s. 2 (*a*).

Powers of Board

46. The Board may inquire into, hear and determine any application by or on behalf of any municipality or person complaining that any municipality constructing, maintaining or operating sewage works or having the control thereof,

(*a*) has failed to do any act, matter or thing required to be done by an Act or regulation, order or direction, or by any agreement entered into with the municipality; or

(*b*) has done or is doing any such act, matter or thing improperly,

and that the same is causing deterioration, loss, injury or damage to property, and the Board may make any order, award or finding in respect of any such complaint as it considers just. R.S.O. 1970, c. 332, s. 46.

Right to compensation

R.S.O. 1970, c. 154

47. Where land is expropriated by a municipality for sewage works or is injuriously affected by the construction, maintenance or operation of sewage works by a municipality, *The Expropriations Act* applies. R.S.O. 1970, c. 332, s. 47.

Construction or operation of approved sewage works by statutory authority

48. Sewage works that are being or have been constructed, maintained or operated with the approval of the former Department of Health, the Commission, the Executive Director, Water Supply and Pollution Control of the Ministry or of a Director and in accordance with the terms and conditions imposed in any order, direction, report or regulation of the former Department of Health, the Commission, the Minister of Health, the Executive Director, Water Supply and Pollution Control of the Ministry, a Director or the Board under the authority of this Act or any predecessor of any provision of this Act, so long as the sewage works are being so constructed or are so constructed, maintained or operated, shall be deemed to be under construction, constructed, maintained or operated by statutory authority. 1974, c. 19, s. 18.

Returns by owner to Director

49. The owner of sewage works shall whenever required by a Director make returns to the Director of such matters as may be required by the Director, and any such owner who for the space of thirty days after being so required fails or neglects to make the returns required is guilty of an offence and on summary conviction is liable to a fine of not more than $100. R.S.O. 1970, c. 332, s. 49; 1974, c. 19, s. 2 (*a*).

Sewage works to be kept in repair

50.—(1) Sewage works shall at all times be maintained, kept in repair and operated in such manner and with such facilities as may be directed from time to time by a Director. R.S.O. 1970, c. 332, s. 50 (1); 1974, c. 19, s. 2 (*a*).

Offence

(2) Every person, except a municipality, who fails to comply with any direction given by a Director under subsection 1 is guilty of an offence and on summary conviction is liable to a fine of $500 for every day upon which such default continues. R.S.O. 1970, c. 332, s. 50 (2); 1974, c. 19, s. 2 (*a*).

Duty to maintain, etc., works

51.—(1) Where a Director reports in writing to the clerk of a municipality that he is of the opinion that it is necessary in the public interest that water works or sewage works or any part thereof be established, maintained, operated, improved, extended, enlarged, altered, repaired or replaced, it is not necessary to obtain the assent of the electors to any by-law for incurring a debt for any such purpose and the municipality shall forthwith do every act and thing in its power to implement the report of the Director. R.S.O. 1970, c. 332, s. 51 (1); 1974, c. 19, s. 2 (*a*).

Offence

(2) Every municipality that fails to do every act and thing in its power to implement a report made to it under subsection 1 forthwith after receipt of the report is guilty of an offence and on summary conviction is liable to a fine of $500 for every day upon which such default continues after receipt of the report. R.S.O. 1970, c. 332, s. 51 (2).

Power of Director to implement report

(3) Where the municipality fails to do every act and thing in its power to implement a report made to it under subsection 1 forthwith after receipt of the report, and the time for taking an appeal has passed or there has been final disposition of an appeal by which the report is confirmed or altered, the Director, with the approval of the Board, may direct that whatever is necessary to implement the report or the report as confirmed or altered be done at the expense of the municipality, and the Minister may recover the expense incurred in doing it, with costs, by action in a court of competent jurisdiction, as a debt due to the Crown by such municipality. 1974, c. 19, s. 19.

PROJECTS

Application for water or sewage works

52.—(1) Any one or more municipalities may apply to the Minister for the provision of and operation by the Minister of water works or sewage works for the municipality or municipalities. R.S.O. 1970, c. 332, s. 52 (1); 1972, c. 1, s. 70 (2).

Duty of Minister

(2) The Minister may thereupon furnish to such municipality or municipalities,

(*a*) an estimate of the cost of the project and such other information as the Minister considers advisable;

(*b*) a statement of the terms and conditions including the method of financing as determined by the Minister upon which the Minister will complete and operate the project; and

(*c*) a form of agreement to be entered into between the municipality or municipalities and the Crown. R.S.O. 1970, c. 332, s. 52 (2); 1972, c. 1, s. 70 (2, 3); 1974, c. 19, s. 20.

Power to make agreement

(3) The council of any municipality may by by-law authorize the municipality to enter into such an agreement with the Crown and, subject to the approval of the Lieutenant Governor in Council, the Crown may enter into any such agreement with any municipality or municipalities

and, when such an agreement has been entered into, the parties thereto have all such powers as may be necessary to carry out the provisions thereof or of any undertaking given pursuant thereto. R.S.O. 1970, c. 332, s. 52 (3); 1972, c. 1, s. 70 (3).

Assent of electors not required

(4) Notwithstanding *The Municipal Act* or any other Act, it is not necessary for the council of any municipality to obtain the assent of the electors to the passing of any such by-law or the entering into of any such agreement with the Crown. R.S.O. 1970, c. 332, s. 52 (4); 1972, c. 1, s. 70 (3).

R.S.O. 1970, c. 284

Minister to act for municipality for approval of Board

(5) Where a municipality that proposes to enter into an agreement with the Crown is required to obtain the approval of the Board with respect to any aspect of the proposed project, the application for such approval shall be made by the Minister on behalf of the municipality. R.S.O. 1970, c. 332, s. 52 (5); 1972, c. 1, s. 70 (2, 3).

Term of agreement

(6) Notwithstanding any other Act, every such agreement remains in force for such period as it may prescribe and in any event until all obligations to the Crown of the municipality or municipalities party or parties to the agreement have been discharged to the satisfaction of the Minister. R.S.O. 1970 c. 332, s. 52 (6); 1972, c. 1, s. 70 (2, 3).

Agreement binding on local board

(7) Where a municipality has entered into an agreement with the Crown under this section, the agreement is binding on any commission or local board having the control and management of water works or sewage works, as the case may be, in the municipality. R.S.O. 1970, c. 332, s. 52 (7); 1972, c. 1, s. 70 (3).

Form of agreement

(8) Any agreement under this section may be evidenced by one or more documents. R.S.O. 1970, c. 332, s. 52 (8).

Payments by municipalities to Treasurer under agreement

53.—(1) Every municipality that has entered into an agreement with the Crown under section 52 before the 1st day of April, 1974 shall pay to the Treasurer the following sums or, where such agreement is with more than one municipality, or where the project requires more than one agreement at least one of which is with a municipality, its share as adjusted by the Minister, of the following sums:

1. In each calendar year during the currency of such agreement, commencing with the calendar year in which occurs the date of completion of such project,

   (*a*) the proportion payable by the municipality or municipalities party or parties to the

project, as adjusted by the Minister, of the total amount of interest and expenses of debt service that would be payable by the Commission in each such year if the Commission were not dissolved in respect of all borrowings of the Commission from time to time outstanding and made by the Commission at any time before or after the making of such agreement for the purpose of meeting,

   (i) the cost or estimated cost of all projects, except projects under agreements referred to in subsection 2, or

   (ii) the cost or estimated cost of all projects referred to in subsection 2,

   at any time theretofore or thereafter acquired, provided or constructed or in course of acquisition, provision or construction by the Commission pursuant to any agreement or agreements, or for any other purpose of the Commission respecting such projects, including the refunding or repayment in whole or in part of any such borrowings;

   (*b*) the total cost to the Crown in each such year of the operation, supervision, maintenance, repair, administration and insurance of such project; and

   (*c*) the total amount in each such year placed by the Minister to the credit of the reserve account referred to in subsection 1 of section 57 in respect of such project or an amount equal to 1½ per cent of the cost of such project, whichever is less, and such additional amount as may be approved by the municipality or municipalities.

2. In each calendar year for such period of years as may be prescribed by such agreement, commencing not later than the fifth calendar year next following the date of completion of such project, such sum as would be necessary with interest compounded annually thereon at such rate as is prescribed by regulation to form at the

expiry of such period of years a fund equal to the cost of such project. 1972, c. 1, s. 70 (3); 1974, c. 19, s. 21 (1).

Interest and expenses of debt service

(2) In respect of agreements under section 52 entered into after the 31st day of December, 1965 and before the 1st day of April, 1974, the interest and expenses of debt service that would be payable by the Commission referred to in clause *a* of paragraph 1 of subsection 1 shall, in each year during the currency of the agreement, be the amount calculated by applying the average rate of such interest and expenses as would have been payable to the Treasurer in respect of the project.

Annual adjustment of payments

(3) The Minister shall annually adjust and apportion among the respective municipalities the sums payable to the Treasurer by such municipalities under subsection 1. 1974, c. 19, s. 21 (2).

Settlement of disputes

(4) In the event of any dispute arising as to the adjustment or apportionment of any sums payable to the Treasurer by the respective municipalities under subsection 1, such dispute shall be referred to a sole arbitrator to be appointed by the Lieutenant Governor in Council, and the award of the arbitrator is final and binding on the Crown and the Treasurer and the municipality or municipalities concerned. R.S.O. 1970, c. 332, s. 53 (4); 1972, c. 1, s. 70 (2, 33); 1974, c. 19, s. 2 (*e*).

Costs

(5) Such arbitrator shall be paid for his services such amount as may be directed by the Lieutenant Governor in Council and the whole costs of such arbitration shall be paid as directed by the arbitrator in his award.

R.S.O. 1970, c. 286, to apply

(6) Except as otherwise provided in this section, *The Municipal Arbitrations Act* applies to any arbitration under subsection 4. R.S.O. 1970, c. 332, s. 53 (5, 6).

Sewer rates and water works rates

54.—(1) The council of a municipality that has entered into or proposes to enter into an agreement with the Crown under section 52 may by by-law, subject to the approval of the Board, provide for imposing upon owners or occupants of land who derive or will or may derive a benefit from the project a sewer rate or water works rate, as the case may be, sufficient to pay the whole or such portion as the by-law may specify of the annual payments to the Treasurer required to be made,

(*a*) where the agreement is or has been entered into before the 1st day of April, 1974, under clause *a* of paragraph 1 and paragraph 2 of subsection 1 of section 53; or

(*b*) where the agreement is entered into on or after the 1st day of April, 1974, under the agreement for the cost of the project,

and, with the like approval, such by-law may from time to time be amended or repealed. 1974, c. 19, s. 22, *part*.

Commutation of rates

(2) Where a by-law under subsection 1 imposes a sewer rate or water works rate upon owners or occupants of land, the council of the municipality may provide for commutation for a payment in cash of the whole or any part of the rate imposed and may prescribe the terms and conditions thereof. R.S.O. 1970, c. 332, s. 54 (2).

Sewage service rate and water service rate

(3) The council of a municipality that has entered into or proposes to enter into an agreement with the Crown under section 52 may by by-law provide for imposing upon owners or occupants of land from which sewage is received, treated or disposed of or to which water is supplied through or by the project a sewage service rate or water service rate, as the case may be, sufficient to pay the whole or such portion as the by-law may specify of the annual payments to the Treasurer required to be made,

(*a*) where the agreement is or has been entered into before the 1st day of April, 1974, under clauses *b* and *c* of paragraph 1 of subsection 1 of section 53; or

(*b*) where the agreement is entered into on or after the 1st day of April, 1974, under the agreement for,

(i) the total cost to the Crown in each year of the operation, supervision, maintenance, repair, administration and insurance of the project, and

(ii) the total amount in each year placed by the Minister to the credit of any reserve account established under the agreement for the project. 1974, c. 19, s. 22, *part*.

Application of R.S.O. 1970, c. 284, s. 362

(4) Subject to this section, section 362 of *The Municipal Act* applies *mutatis mutandis* to sewer rates and sewage service rates imposed under this section.

Idem

(5) Every water works rate or water service rate imposed under this section shall, in so far as is practicable and subject to this section, be imposed in the same manner and with and subject to the same provisions as apply to a water works rate or sewage service rate, respectively, under section 362 of *The Municipal Act*, and that section applies *mutatis mutandis* to the imposition of such rates. R.S.O. 1970, c. 332, s. 54 (4, 5).

R.S.O. 1970, c. 284

Cost of construction of service drains

55. Where an agreement is made with a municipality for the provision of sewers under subsection 1*a* of section 17 or under section 52, the municipality may charge the owner of the premises for which a service drain is constructed the cost of construction of the service drain from the sewer to the line of the highway, together with interest thereon at a rate to be determined by the municipality, over such period of years as the municipality determines. R.S.O. 1970, c. 332, s. 55; 1972, c. 1, s. 70 (34).

When payments to be made

56.—(1) As soon as practicable in each calendar year, and in any event not later than the 15th day of February, the Minister shall estimate the respective amounts payable to the Treasurer in such calendar year by each of the municipalities having agreements with the Crown under section 52 entered into before the 1st day of April, 1974 and shall by his precept directed to each municipality require such municipality to pay to the Treasurer on the dates specified in the agreement the sums so payable by each municipality and the municipality shall make payment to the Treasurer accordingly, but in the calendar year in which occurs the date of completion of the project the estimate by the Minister may be made and the precept of the Minister may be delivered at any time in such year as the Minister may determine and the payment or payments by the municipality shall be made at such time or times as the Minister may require.

Adjustment

(2) At the end of each calendar year, the actual sums payable by each municipality to the Treasurer for such year for the purposes aforesaid shall be ascertained by the Minister and the Minister shall inform the municipality of the amount owing to or by it and such amount shall be deducted from or added to the first payment to be made by the municipality in the next calendar year. 1974, c. 19, s. 23 (1).

Delivery

(3) The mailing by the Minister of the precepts by registered mail in envelopes addressed to the clerks of the respective municipalities constitutes delivery of the precepts to them. R.S.O. 1970, c. 332, s. 56 (3); 1972, c. 1, s. 70 (2).

Prepayment

(4) A municipality may pay and the Treasurer may accept,

(*a*) in advance of the time that it would otherwise be payable, any sum in respect of any sum mentioned in section 53; and

(*b*) any sum to reduce the cost of a project. R.S.O. 1970, c. 332, s. 56 (4); 1974, c. 19, s. 2 (*c*).

Municipalities may raise moneys for agreements

(5) For the purpose of meeting the periodic payments to the Treasurer under an agreement entered into under section 52, a municipality may raise money by any method or methods authorized by law or by any combination thereof as if the municipality itself were proposing to construct, were constructing or had constructed the works or were operating and maintaining the works. R.S.O. 1970, c. 332, s. 56 (5); 1974, c. 19, s. 23 (2).

Reserve accounts

57.—(1) The Minister may establish and maintain a reserve account in respect of each project under section 52,

(*a*) to provide for renewals and replacements in respect of the project;

(*b*) to provide for contingencies in respect of such project; and

(*c*) to provide for capital expenditures for the improvement of the project in relation to its operation and appearance,

and for such purposes may place to the credit of or charge to such reserve accounts such amounts as may in the opinion of the Minister be sufficient therefor.

When moneys may be expended in respect of another project

(2) Notwithstanding subsection 1, where a reserve account has been established in respect of a project, the Minister may, in respect of any other project for the same municipality, charge to such reserve account such amounts as in the opinion of the Minister may be sufficient therefor for any of the purposes mentioned in clauses *a*, *b* and *c* of subsection 1. 1974, c. 19, s. 24 (1).

(3, 4) REPEALED: 1974, c. 19, s. 24 (2).

Ministry of the Environment Reserve Fund

57*a*.—(1) All amounts heretofore placed and remaining or hereafter placed to the credit of all reserve accounts under any agreements under this Act shall be deposited with the Treasurer to the credit of a special consolidated account in the Consolidated Revenue Fund to be called

"Ministry of the Environment Reserve Account" and the interest applicable in each year to the consolidated account as determined by the Treasurer shall be allocated and credited by the Minister at the end of each year to each reserve account proportionately having regard to the respective balances from time to time remaining to the credit of the respective reserve accounts.

Idem

(2) The accounts of the Minister with respect to the reserve accounts referred to in subsection 1 shall be kept so as to exhibit at all times the amounts placed to the credit of each reserve account, the interest credited thereon and the payments made in respect thereof. 1974, c. 19, s. 25.

Ministry of the Environment Debt Retirement Account

58.—(1) All amounts heretofore placed and remaining or hereafter placed to the credit of all municipalities with respect to all moneys received from the municipalities under paragraph 2 of subsection 1 of section 53 shall be deposited with the Treasurer to the credit of a special consolidated account in the Consolidated Revenue Fund to be called "Ministry of the Environment Debt Retirement Account" and that part of the amounts so credited as is attributable to each project shall remain as a credit in the Ministry of the Environment Debt Retirement Account until the expiration of the period of years during which payments are required to be made in respect of such project under paragraph 2 of subsection 1 of section 53.

Idem

(2) The interest applicable in each year to the consolidated account as determined by the Treasurer shall be allocated and credited by the Minister at the end of each year to the respective projects proportionately having regard to the respective balances in the consolidated account from time to time attributable to such projects and the accounts of the Minister with respect to such projects shall be kept so as to exhibit at all times the amounts placed to the credit of each project, the interest credited thereon and the payments made in respect thereof.

Discontinuance of further payments

(3) If at any time the amount in the consolidated account attributable to any project is, in the opinion of the Minister, sufficient with the further estimated interest thereon to form at the expiration of the period of years referred to in paragraph 2 of subsection 1 of section 53 an amount equal to the cost of the project, the Minister, subject to subsection 4 of this section and with the consent of the Treasurer, may authorize the municipality or municipalities with whom the Crown has an agreement in respect of such project to discontinue any further payments under paragraph 2 of subsection 1 of section 53.

Excess or deficiency

(4) If at the expiration of such period of years the amount in the consolidated account attributable to any project,

(*a*) is in excess of the cost of the project, the Treasurer shall within one year thereafter repay to such municipality or municipalities the amount of such excess; or

(*b*) is less than the cost of the project, the municipality or municipalities shall, within one year thereafter, pay to the Treasurer the amount of such deficiency.

Discharge of indebtedness to Province

(5) Notwithstanding any other provision of this Act, the Treasurer may at any time, upon the request of the Minister, pay to the Province out of the Ministry of the Environment Debt Retirement Account any sum attributable to any project in payment or part payment of the amount owing to the Crown for the cost of the project. 1974, c. 19, s. 26.

Ontario Water Resources Reserve and Debt Retirement Accounts

59. All moneys in the Ontario Water Resources Reserve Account and the Ontario Water Resources Debt Retirement Account immediately before this section comes into force and all investments derived from moneys at any time in those accounts vest in the Crown and the Crown is bound by the liabilities in respect of such moneys and investments. 1974, c. 19, s. 27.

Annual payments to municipalities in lieu of taxes R.S.O. 1970, c. 32

60. For the purposes of section 35 of *The Assessment Act*, the Crown, with respect to any project in a city, town, village or township, shall be deemed a commission under clause *a* of subsection 1 of that section and the project shall be deemed a public utility under clause *b* of subsection 1 of that section. R.S.O. 1970, c. 332, s. 60; 1972, c. 1, s. 70 (3).

PUBLIC WATER OR SEWAGE SERVICE AREA

Interpretation

61.—(1) In this section,

(*a*) "sewage service" means the acceptance, collection, transmission, storage, treatment and disposal of sewage, or any one or more of them;

(*b*) "water service" means the taking, collection, production, treatment, storage, supply, transmission, distribution, sale, purchase and use of water, or any one or more of them. R.S.O. 1970, c. 332, s. 61 (1).

Area of public water or sewage service

(2) Notwithstanding any general or special Act or any regulation or order made thereunder, where, in the opinion of a Director, it is in the public interest to do so, the Director may make an order defining and designating an area as an area of public water service or an area of public sewage service, and, by order from time to time, for the purpose of controlling, regulating, prohibiting, requiring or providing water service or sewage service in the area, may,

(a) impose such terms and conditions in the area as the Director considers necessary;

(b) require that any contract with respect to water service or sewage service in the area be terminated or amended in accordance with the order; and

(c) fix and impose rates or charges upon any municipality or person in the area for the provision by the Minister of water service or sewage service to the municipality or person. R.S.O. 1970, c. 332, s. 61 (2); 1972, c. 1, s. 70 (2, 40); 1974, c. 19, s. 2 (c).

Termination or amendment of contracts

(3) Where an order is made by a Director requiring that any contract be terminated or amended, such contract shall be deemed to be terminated and no longer operative or binding upon or against any municipality or person or shall be deemed to be amended, as the case may be, in accordance with the order. R.S.O. 1970, c. 332, s. 61 (3); 1974, c. 19, s. 2 (c).

Hearing

(4) A Director shall, before making an order under subsection 2, hold a public hearing and give at least twenty-one days notice of the hearing to the clerk of such municipality or municipalities and to such person or persons and in such manner as the Director may direct. R.S.O. 1970, c. 332, s. 61 (4); 1974, c. 19, s. 2 (c).

Amending order

(5) A Director may amend the terms and conditions in any order, and may amend the definition or designation of an area in any order, but, before amending the definition or designation of an area, the Director shall comply with the requirements of subsection 4 with respect to the holding of a hearing and the giving of notice thereof. R.S.O. 1970, c. 332, s. 61 (5); 1972, c. 1, s. 70 (41); 1974, c. 19, s. 2 (c).

(6) REPEALED: 1972, c. 1, s. 70 (42).

Copies of order

(7) A copy of an order of a Director made under this section shall be sent by the Director by registered mail to the clerk of every municipality and to every person named in the order, and to such other persons as the Director may direct. R.S.O. 1970, c. 332, s. 61 (7); 1972, c. 1, s. 70 (43); 1974, c. 19, s. 2 (c).

Petition re definition of area

(8) Upon the petition of,

(a) any municipality affected by an order under this section;

(b) any person who is a party to a contract terminated or amended by an order under this section; or

(c) any owner or occupant of land in an area of public water service or an area of public sewage service who is affected by an order under this section in a different manner and to a different extent than all other owners or occupants of land in the area,

filed with the Clerk of the Executive Council within twenty-eight days after the mailing of copies of the order under subsection 7, the Lieutenant Governor in Council may confirm, vary or rescind the definition or designation of the area in the order, and such confirmation, variation or rescission is binding upon a Director and such municipality, person, owner or occupant. R.S.O. 1970, c. 332, s. 61 (8); 1974, c. 19, s. 2 (c).

Compensation

(9) Where a contract is terminated or amended by an order under this section, the Crown shall make due compensation to any municipality or person named in the contract as a party thereto for any damage necessarily resulting from the termination or amendment of the contract, as the case may be, beyond any advantage that it or he may derive from water service or sewage service provided under the order. R.S.O. 1970, c. 332, s. 61 (9); 1972, c. 1, s. 70 (3).

Determination of compensation

R.S.O. 1970, c. 323

(10) Subject to this section, a claim for compensation, if not agreed upon by a Director and the municipality or person making the claim, shall be determined by the Board and not otherwise, and *The Ontario Municipal Board Act*, except section 94, applies as far as is practicable to every such claim. R.S.O. 1970, c. 332, s. 61 (10); 1974, c. 19, s. 2 (c).

(11) For the purpose of meeting periodic payments to the Treasurer under an order made under this section, a municipality may raise money by any method or methods authorized by law or by any combination thereof as if the municipality itself were proposing to construct, were constructing or had constructed water works or sewage works or were operating and maintaining water works or sewage works. R.S.O. 1970, c. 332, s. 61 (11); 1974, c. 19, s. 2 (*e*). Municipality may raise money for payments under order

(12) For the purpose of meeting periodic payments to the Treasurer under an order made under this section, a municipality may, with the approval of the Board, by by-law define an area that in the opinion of the council of the municipality will derive a benefit from the water service or sewage service provided under the order and may impose a rate or charge upon the owners or occupants of all land in such defined area. R.S.O. 1970, c. 332, s. 61 (12); 1974, c. 19, s. 2 (*e*). Rates in defined area

(13) Every municipality or person who contravenes any order made under this section is guilty of an offence and on summary conviction is liable to a fine of $500 for every day upon which such contravention continues. R.S.O. 1970, c. 332, s. 61 (13). Offence

(14) Upon the petition of any municipality or person required to pay a rate or charge imposed by an order under this section, filed with the Clerk of the Executive Council within twenty-eight days after the mailing of copies of the order under subsection 7, the Lieutenant Governor in Council may confirm, vary or rescind such rate or charge or may refer the petition to the Board or to such person or persons as the Lieutenant Governor in Council may designate, and the Board or such person or persons may confirm, vary or rescind such rate or charge, and any order made by the Lieutenant Governor in Council or the Board or such person or persons with respect thereto is binding upon the Treasurer and a Director and the municipality and person required to pay such rate or charge. R.S.O. 1970, c. 332, s. 61 (14); 1972, c. 1, s. 70 (44); 1974, c. 19, s. 2 (*c*, *e*). Petition re rates and charges

REGULATIONS

62.—(1) Subject to the approval of the Lieutenant Governor in Council, the Minister may make regulations, Regulations

(*a*) regulating and controlling the location, construction, repair, removal or alteration of mains, service pipes, valves, hydrants and all other works in or upon public property that form part of or are connected with water works;

(*b*) regulating and controlling the manner in which the service pipes of users of water shall be connected with the mains of the water works supplying the water;

(*c*) regulating and controlling the location, construction, repair, removal or alteration of sewers, drain pipes, manholes, gully traps and all other works in or upon public property that form part of or are connected with sewage works;

(*d*) regulating and controlling the manner in which building sewers shall be connected with sewage works;

(*e*) prescribing the rate of interest for the purpose of paragraph 2 of subsection 1 of section 53;

(*f*) regulating and controlling the location, construction, repair, renewal or alteration of plumbing and the material to be used in the construction thereof, and requiring municipalities to carry out such inspections with respect to plumbing as may be prescribed;

(*g*) adopting by reference, in whole or in part, with such changes as the Minister considers necessary, the standards made or adopted by the Canadian Standards Association respecting pipes, fittings, fixtures and materials used in plumbing, and providing for the testing and marking of such pipes, fittings, fixtures and materials or any class or classes thereof by the Canadian Standards Association and prohibiting the use in plumbing of such pipes, fittings, fixtures and materials that are not marked as approved by the Canadian Standards Association;

(*h*) defining plumbing for the purposes of the regulations;

(*i*) regulating and controlling the content of sewage entering sewage works;

(*j*) classifying persons who operate water works, and sewage works and requiring and providing for the licensing of water work and sewage work

operators or any class or classes thereof, and prescribing the qualifications of persons to whom licences may be issued, and prescribing and charging fees for such licences, and providing for the revocation and suspension of licences;

(*k*) prescribing standards of quality for potable and other water supplies, sewage and industrial waste effluents, receiving streams and water courses;

(*l*) specifying any matter or substance as sewage for the purposes of any section or sections of this Act or of any regulation made thereunder;

(*m*) prescribing operating standards for water works or sewage works;

(*n*) requiring and regulating the storage, treatment and disposal of sewage in boats and ships or any class or classes thereof and the equipment therefor, and prohibiting the use and installation of equipment for the storage, treatment or disposal of sewage in boats and ships or any class or classes thereof unless the equipment and installation thereof conform to the regulations, and providing for and requiring the approval of a Director for any such equipment, and prohibiting and regulating the discharge of sewage from such boats and ships or any class or classes thereof;

(*o*) regulating and controlling, for the purpose of preventing or reducing the pollution of any body of water or watercourse, places or any class or classes thereof located on or adjacent to any body of water or watercourse where moorings are provided for boats or ships or where any services are provided for boats or ships or the occupants thereof, and regulating and governing persons providing such moorings or services, or any class or classes thereof;

(*p*) defining sewage for the purposes of regulations made under clauses *n* and *o*;

(*q*) designating areas within which wells or holes may not be made for the purpose of obtaining water, except by digging, without a permit issued by a Director;

(*r*) regulating and controlling the location, spacing, boring and drilling of water wells, the construction

and materials used in the construction, alteration or repair of water wells, the pumps and other equipment used in connection with water wells, the use of water wells, the abandonment of water wells, the cleansing and disinfecting of water wells, prescribing the records and the form of the records with respect to water wells that shall be kept by the owners thereof and defining "owner" for the purpose of this clause;

(*s*) requiring and providing for the licensing of persons who operate equipment for the boring or drilling of wells for water and prescribing the qualifications of persons to whom licences may be issued, and prescribing and charging fees for such licences, and providing for the revocation and suspension of licences;

(*t*) prescribing the forms required for the purposes of section 40 and the fees for licences authorized thereby and for the renewal of such licences, and prescribing the terms and conditions upon which such licences may be issued;

. . . . .

(*v*) regulating and controlling the use of water from any source of supply;

(*w*) exempting any sewage works or any class or type thereof from section 42 and any water works or any class or type thereof from subsections 1 and 3 of section 41;

(*x*) providing for a grievance board and prescribing its jurisdiction, powers and duties, including any powers of a commission under Part II of *The Public Inquiries Act, 1971* designating the classes of its employees that may grieve, and prescribing the procedures to be followed for hearing and dealing with grievances;

1971, c. 49

(*y*) respecting any matter necessary or advisable to carry out effectively the intent and purpose of this Act. R.S.O. 1970, c. 332, s. 62 (1); 1971, c. 49, s. 18; 1972, c. 1, s. 70 (2, 5); 1973, c. 90, s. 4; 1974, c. 19, s. 2 (*a*, *b*); 1974, c. 19, s. 28.

Application of regulations

(2) The application of any regulation made under this section may be general or may be limited territorially or as to time or otherwise.

Offence

(3) Every municipality or person who contravenes any regulation made under this section is guilty of an offence and on summary conviction is liable to a fine of not less than $25 and not more than $1,000. R.S.O. 1970, c. 332, s. 62 (2, 3).

Plumbing inspection by local municipality or local board of health

63.—(1) Where a local municipality undertakes to carry out inspections with respect to plumbing as prescribed by regulations made under section 62, the local municipality and the local board of health of the municipality or, where a local board of a health unit has jurisdiction in the municipality, the local board of the health unit may enter into agreements providing that the local board shall carry out such inspections upon such terms and conditions as may be agreed upon.

by county or health unit

(2) Where a county council by a two-thirds vote provides that such inspections shall be carried out by the county, such inspections shall be carried out in the municipalities that form part of the county for municipal purposes only by the county, provided that, where there is a health unit in the county, the county and the local board of the health unit may enter into agreements providing that the board shall carry out such inspections upon such terms and conditions as may be agreed upon.

by county and health unit

(3) Where a county and a local board of a health unit have entered into an agreement under subsection 2 and the local board does not have jurisdiction in all of the municipalities that form part of the county for municipal purposes, the county shall carry out such inspections in the municipalities that do not form part of the health unit. R.S.O. 1970, c. 332, s. 63.

Plumbing inspection by-laws

64.—(1) Where a local municipality, a county or a local board of health or the local board of a health unit undertakes under section 63 or the regulations made under section 62 or under an agreement to inspect plumbing, the municipality or local board, as the case may be, may pass by-laws,

(*a*) providing for such inspections and for appointing one or more inspectors for such purpose;

(*b*) for charging fees for such inspections and fixing the amounts thereof;

(*c*) for requiring the production of plans of plumbing that is to be constructed, repaired, renewed or altered and of the location of drains, pipes, traps

and other works or appliances that are or are to be part of or connected with the plumbing, and for charging fees for the inspection and approval of such plans, and fixing the amount of the fees; and for the issuing of a permit certifying to such approval and requiring that without such permit no such plumbing may be constructed, repaired, renewed or altered;

(*d*) for prohibiting the use of such plumbing until it has been inspected and found to conform to the regulations made under clause *f* of subsection 1 of section 62.

Penalties R.S.O. 1970, c. 284

(2) Subject to section 72, Part XXI of *The Municipal Act* applies *mutatis mutandis* to by-laws passed under this section.

Inspector may enter premises

(3) An inspector may at all reasonable hours enter any premises to inspect plumbing to which the regulations made under section 62 are applicable, and every person who prevents or obstructs or attempts to prevent or obstruct any such entry or inspection is guilty of an offence and on summary conviction is liable to a fine of not more than $25. R.S.O. 1970, c. 332, s. 64.

Interpretation

65.—(1) In this section, "owner" includes the person for the time being managing or receiving the rent of or paying the municipal taxes on the land or premises in connection with which the word is used whether on his own account or as agent or trustee of any other person or who would so receive the rent if such land and premises were let.

Owner may be required to make plumbing conform to code

(2) Where a person has been convicted of constructing, repairing, renewing or altering plumbing in a manner that does not conform to the regulations made under section 62 and the time for appealing such conviction has elapsed and no appeal from such conviction is pending, the municipality or local board responsible for inspecting such plumbing may, by notice sent by registered mail to the owner of the land and premises in which the plumbing is located, require him to make the plumbing conform to such regulations within such period as may be stated in the notice.

Notice

(3) The notice shall specify wherein the plumbing does not conform to the regulations and that, if it is not made to conform within the period stated in the notice, the work may be done by the municipality or local board in accordance with subsection 4.

(4) If the owner of the land and premises does not comply with the notice, the municipality or local board that sent the notice may, at the expense of the owner, make the plumbing conform to the regulations, and for that purpose its servants and agents may from time to time enter upon the land and premises. Work may be done by municipality

(5) The municipality or local board that caused the work to be done to make the plumbing conform has a lien for the amount expended by it or on its behalf together with interest at the rate of 6 per cent per annum upon the land and premises in which the plumbing is located, and the municipality or local board may direct that such amount with interest be added to the collector's roll of the local municipality in which the land and premises are situated and collected in like manner as municipal real property taxes and paid over to the municipality or local board, as the case may be. R.S.O. 1970, c. 332, s. 65. Collection of expenses

66. Notwithstanding any general or special Act, no provision of a by-law of a municipality, heretofore or hereafter passed, with respect to any matter that may be dealt with by regulation under clauses *f*, *g* and *h* of subsection 1 of section 62 has any force or effect. R.S.O. 1970, c. 332, s. 66. Plumbing provisions in by-laws

MISCELLANEOUS

67. An information in respect of any contravention of this Act may be for one or more offences and no information, summons, warrant, conviction or other proceeding in any such prosecution is objectionable or insufficient by reason of the fact that it relates to two or more offences. R.S.O. 1970, c. 332, s. 67. Multiple informations

68. In any prosecution under this Act or the regulations or in any proceeding in the Supreme Court under this Act, the production of a certificate or report of an analyst of the Ministry as to the analysis, ingredients or quality of any water or of any material, whether liquid, gaseous or solid or of any combination thereof, is *prima facie* evidence of the facts stated therein and of the authority of the person making the certificate or report without any proof of appointment or signature. R.S.O. 1970, c. 332, s. 68; 1972, c. 1, s. 70 (46). Certificate of analyst as evidence

69.—(1) If an industrial or commercial enterprise makes arrangements for the collection, transmission, treatment or disposal of sewage that are considered unsatisfactory by a Director, the Director may require such industrial or commercial enterprise, Sewage disposal

(*a*) to make investigations and submit reports to the Director in respect of the collection, transmission, treatment or disposal of sewage;

(*b*) to install, construct or arrange such facilities for the collection, transmission, treatment or disposal of sewage; and

(*c*) to maintain, keep in repair and operate such facilities,

as may be directed from time to time by the Director.

Idem (1*a*) If an industrial or commercial enterprise makes no arrangements for the collection, transmission, treatment or disposal of sewage, a Director may require such industrial or commercial enterprise,

(*a*) to make investigations and submit reports to the Director in respect of the collection, transmission, treatment or disposal of sewage;

(*b*) to install, construct or arrange such facilities for the collection, transmission, treatment or disposal of sewage; and

(*c*) to maintain, keep in repair and operate such facilities,

as may be directed from time to time by the Director. 1974, c. 19, s. 29.

Offence (2) Every industrial or commercial enterprise that contravenes a direction or requirement of a Director under subsection 1 is guilty of an offence and on summary conviction is liable to a fine of not more than $200 for every day the contravention continues. R.S.O. 1970, c. 332, s. 69 (2); 1974, c. 19, s. 2 (*a*).

Discharge of sewage into sewage works **70.**—(1) Where the discharge or deposit of sewage into a sewage works, in the opinion of a Director, may interfere with the proper operation of a sewage works, the Director may, by notice served on or sent to the municipality that or the person who discharges or deposits or causes or permits the discharge or deposit of sewage, require the municipality or person to stop or regulate such discharge or deposit or to take such measures in relation thereto in such manner and within such time as the notice may require. R.S.O. 1970, c. 332, s. 70 (1); 1974, c. 19, s. 2 (*a*).

(2) Every municipality that or person who contravenes a notice under subsection 1 is guilty of an offence and on summary conviction is liable to a fine of not more than $200 for every day upon which the contravention continues. R.S.O. 1970, c. 332, s. 70 (2). Offence

71.—(1) Except in the case of an application for judicial review or an action or proceeding that is specifically provided for with respect to a person referred to in this subsection in any Act or in a regulation under this or any other Act, no action or other proceeding for damages or otherwise shall be instituted against any member of the Environmental Appeal Board or the Hearing Board or against any employee of the Ministry or any Crown employee within the meaning of *The Public Service Act* acting under the direction of such member or employee of the Ministry for any act done in good faith in the execution or intended execution of any duty or authority under this Act or for any alleged neglect or default in the execution in good faith of any such duty or authority. Protection from personal liability R.S.O. 1970, c. 386

(2) Subsection 1 does not, by reason of subsections 2 and 4 of section 5 of *The Proceedings Against the Crown Act*, relieve the Crown of liability in respect of a tort committed by an agent or servant of the Crown to which it would otherwise be subject and the Crown is liable under that Act for any such tort in a like manner as if subsection 1 had not been enacted. 1974, c. 19, s. 30. Crown not relieved of liability R.S.O. 1970, c. 365

72. Proceedings to enforce any provision of this Act or of any regulation made under this Act or of any by-law passed under clause *c* or *d* of subsection 1 of section 64 may be instituted within one year after the time when the subject-matter of the proceedings arose. R.S.O. 1970, c. 332, s. 72. Proceedings to enforce provisions of Act and regulations

73. Where the Minister or an officer to whom power has been delegated by the Minister under section 9 has authority to direct or require that any matter or thing be done, the Minister or such officer may direct that, in default of its being done by the municipality or person directed or required to do it, such matter or thing shall be done at the expense of such municipality or person, and the Minister may recover the expense incurred in doing it, with costs, by action in a court of competent jurisdiction as a debt due to the Crown by such municipality or person. R.S.O. 1970, c. 332, s. 73; 1972, c. 1, s. 70 (2, 3). Enforcing performance of things required to be done by Minister

74. Where any provision of this Act or any regulation made thereunder or any direction, order, approval, notice Power to restrain by action

or permit, made, granted, given, served or issued by a Director under this Act is contravened, in addition to any other remedy and to any penalty imposed by law, such contravention may be restrained by action at the instance of the Minister. R.S.O. 1970, c. 332, s. 74; 1972, c. 1, s. 70 (2); 1974, c. 19, s. 2 (*d*).

Fees for approval

75. Upon the issuance or alteration of a permit or the giving of approval under this Act, there shall be paid to the Treasurer such fees as the Minister may determine, in each case having regard amongst other things to the time occupied by the Ministry in respect of such issuance, alteration or approval, and the terms and conditions in respect thereof. 1974, c. 19, s. 31.

Fees for copies, information or advice

76. The Minister may charge and collect for payment to the Treasurer such fees as the Minister considers proper,

(*a*) for copies of documents, maps, plans or drawings; or

(*b*) for information or advice in respect of the collection, production, transmission, treatment, storage, supply or distribution of water or sewage,

supplied by the Ministry. 1974, c. 19, s. 32.

False information

77. Every person who knowingly gives false information in any application, return or statement made to the Minister or an employee of the Ministry in respect of any matter under this Act or the regulations made under this Act is guilty of an offence and on summary conviction is liable to a fine of not more than $500. R.S.O. 1970, c. 332, s. 77; 1972, c. 1, s. 70 (2); 1974, c. 19, s. 33.

Recovery of moneys owing to Treasurer

78. Any amount due and payable by a municipality or a person to the Treasurer in respect of any matter under this Act, together with such interest and expenses of debt service as may be determined by the Treasurer with respect to such amount, may be recovered by the Minister with costs in a court of competent jurisdiction as a debt due to the Crown by the municipality or person. 1974, c. 19, s. 34.

Submissions

79.—(1) Where a Director intends to make, give or issue a direction, order, report or notice, other than an emergency order, he shall serve notice of his intention together with written reasons therefor upon the person or municipality to whom he intends to make, give or issue the direction, order, report or notice and shall not make, give or issue

the direction, order, report or notice until fifteen days after the service thereof and such person or municipality may make submissions to him at any time before the making, giving or issuing of the direction, order, report or notice. 1972, c. 1, s. 70 (50), *part*; 1974, c. 19, s. 2 (*d*).

When approval, etc., refused

(2) When a Director,

(*a*) refuses to issue or renew, or cancels or suspends a licence or permit or refuses to grant an approval;

(*b*) imposes terms and conditions in issuing a licence or permit or in granting an approval;

(*c*) alters the terms and conditions of a permit after it is issued; or

(*d*) gives or makes any notice, direction, report or order, except an order under section 61,

he shall serve written notice of the refusal, cancellation or suspension referred to in clause *a*, the terms and conditions imposed or altered as referred to in clause *b* or *c*, or a written copy of the notice, direction, report or order referred to in clause *d*, together with written reasons therefor, in each case upon the applicant or the person or municipality to whom the licence, permit, approval, direction, order, report or notice is issued, as the case may be, and the applicant, person or municipality may, by written notice served upon the Director and the Environmental Appeal Board within fifteen days after the service of the notice, terms and conditions or written copy together with written reasons therefor in each case require a hearing by the Environmental Appeal Board. 1974, c. 19, s. 35 (1).

Hearing 1971, c. 86

(3) The provisions of section 80 of *The Environmental Protection Act, 1971* apply *mutatis mutandis* to a hearing by the Environmental Appeal Board under this section. 1972, c. 1, s. 70 (50), *part*.

Parties to hearing

(4) The applicant, person or municipality requiring the hearing, the Director referred to in subsection 2 and any other persons specified by the Environmental Appeal Board are parties to the hearing. 1974, c. 19, s. 35 (2).

Interpretation

80.—(1) In this section and in section 79, "emergency order" means an order, direction, report or notice issued, made or given under this Act in an emergency by reason of,

(*a*) danger to the health or safety of any person;

(*b*) impairment or immediate risk of impairment of any waters or the use thereof; or

(*c*) injury or damage or immediate risk of injury or damage to any property or to any plant or animal life.

Enforcement of order

(2) No order, direction, report or notice, except an emergency order, shall be enforced until final disposition of an appeal, if any, or until the time for taking an appeal against the order has passed.

Compliance

(3) A person or municipality to whom an emergency order is issued, made or given shall comply with the emergency order forthwith after service of the order or a written copy thereof.

When emergency order altered on appeal

(4) When an emergency order is appealed and is altered or rescinded on final appeal, the alteration or rescission of the order comes into force on the date the final decision on appeal is given. 1972, c. 1, s. 70 (50), *part*.

APPENDIX 4

THE PESTICIDES ACT, 1973

& REGULATION 618/74

The Pesticides Act, 1973

Statutes of Ontario, 1973

CHAPTER 25

as amended by

1974, Chapter 21

— and —

Ontario Regulation 618/74

SEPTEMBER
1974

TORONTO
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CHAPTER 25

The Pesticides Act, 1973

1.—(1) In this Act, Interpretation

1. "air" means open air not enclosed in a building, structure, machine, chimney, stack, flue or vehicle;

2. "Board" means the Pesticides Appeal Board;

3. "Committee" means the Pesticides Advisory Committee;

. . . . .

5. "environment" means the natural environment, a building, structure, machine and vehicle, or any of them;

6. "extermination" means a land extermination, structural extermination or a water extermination;

7. "extermination business" means an activity or enterprise carried on for the purpose of causing an extermination or exterminations to be performed for fee or payment;

8. "exterminator" means a person who, by himself or by his employees, assistants or agents, performs or enters into a contract to perform an extermination;

9. "land" means surface land not enclosed in a building or structure, land covered by water and all subsoil, or any combination or part thereof;

10. "land extermination" means the destruction, prevention or control in, on or over land of a pest or pests by the use of a pesticide but does not include a structural extermination, a water extermination or the destruction, prevention or control of termites;

11. "licence" means a licence issued under this Act and the regulations;

12. "licensee" means a person who is the holder of a licence under this Act;

13. "Minister" means the Minister of the Environment;

14. "Ministry" means the Ministry of the Environment;

15. "natural environment" means the air land and water, or any combination or part thereof, of the Province of Ontario;

16. "operator" means a person who has the control and management of an extermination business, and "operate" has a corresponding meaning;

17. "permittee" means a person who is the holder of a permit under this Act;

18. "person" includes a municipality, a corporation on behalf of Her Majesty in right of Ontario, and an agent of any of them;

19. "person responsible", when used with reference to a pesticide, substance or thing, means,

    (i) the owner,

    (ii) the person having the charge, management or control of the handling, storage, use, disposal, transportation or display, or

    (iii) the person having the charge, management or control,

    of the pesticide, substance or thing;

20. "pest" means any injurious, noxious or troublesome plant or animal life other than man or plant or animal life on or in man and includes any injurious, noxious or troublesome organic function of a plant or animal;

21. "pesticide" means any organism, substance or thing that is manufactured, represented, sold or used as a means of directly or indirectly controlling, preventing, destroying, mitigating, attracting or repelling any pest or of altering the growth, development or characteristics of any plant life that is not a pest and includes any organism, substance or thing registered under the *Pest Control Products Act* (Canada);

R.S.C. 1970, c. P-10

22. "prescribed" means prescribed by the regulations;

23. "provincial officer" means a person who is designated under section 17;

24. "regulations" means the regulations made under this Act;

25. "structural extermination" means the destruction, prevention or control of a pest that may adversely affect a building, structure, machine, vehicle or their contents or the use or enjoyment thereof by any person by the use of a pesticide in, on or in the vicinity of the building, structure, machine or vehicle and includes the destruction, prevention or control of termites;

26. "water" means surface water and ground water, or either of them;

27. "water extermination" means the destruction, prevention or control in, on or over surface water of a pest by the use of a pesticide. 1973, c. 25, s. 1; 1974, c. 21, s. 1 (1).

Idem, Director

(2) In this Act, "the Director" means a Director appointed under section 2*a*. 1974, c. 21, s. 1 (2).

Powers and duties of Minister

2. The Minister, for the purpose of the administration of this Act and the regulations, may,

(*a*) investigate problems relating to pesticides and the control of pests;

(*b*) conduct research relating to pesticides and the control of pests;

(*c*) conduct studies of the effect of pesticides and the control of pests on the quality of the environment;

(*d*) convene conferences and conduct seminars and educational programs relating to pesticides and the control of pests;

(*e*) gather, publish and disseminate information relating to pesticides and the control of pests;

(*f*) make grants and loans for research related to pesticides and the control of pests in such amounts and upon such terms and conditions as the regulations may prescribe;

(*g*) appoint committees to perform such advisory functions as the Minister considers requisite;

(*h*) with the approval of the Lieutenant Governor in Council, enter into an agreement with any government or person relating to pesticides or the control of pests. 1973, c. 25, s. 2.

Appointment of Directors

2*a*.—(1) The Minister shall appoint in writing such employees of the Ministry as he considers necessary as Directors in respect of such sections of this Act and in respect of such of the regulations or sections thereof as are set out in the appointments.

Limitation of authority of Director

(2) The Minister, in an appointment pursuant to subsection 1, may limit the authority of a Director in such manner as the Minister considers necessary or advisable. 1974, c. 21, s. 2.

Prohibition

3. No person, whether acting or not acting under the authority of a licence or permit under this Act or an exemption under the regulations, shall deposit, add, emit or discharge or cause or permit the deposit, addition, emission or discharge of a pesticide or of any substance or thing containing a pesticide into the environment that,

(*a*) causes or is likely to cause impairment of the quality of the environment for any use that can be made of it greater than the impairment, if any, for such use that would necessarily result from the proper use of the pesticide;

(*b*) causes or is likely to cause injury or damage to property or to plant or animal life greater than the injury or damage, if any, that would necessarily result from the proper use of the pesticide;

(*c*) causes or is likely to cause harm or material discomfort to any person greater than the harm or material discomfort, if any, that would necessarily result from the proper use of the pesticide;

(*d*) adversely affects or is likely to affect adversely the health of any person to a greater degree than the adverse effect, if any, that would necessarily result from the proper use of the pesticide;

(*e*) impairs or is likely to impair the safety of any person to a greater degree than the impairment, if any, of the safety of any person that would necessarily result from the proper use of the pesticide; or

(*f*) renders or is likely to render, directly or indirectly, any property or plant or animal life unfit for use by man to a degree greater than the unfitness, if any, that would necessarily result from the proper use of the pesticide. 1973, c. 25, s. 3.

Prohibition as to exterminations

4.—(1) No person shall engage in, perform or offer to perform an extermination except under and in accordance with a licence of a prescribed class and except by the use of a pesticide of a class and under the conditions for use prescribed for that class of licence or unless exempt under the regulations.

Licence required to operate extermination business

(2) No person shall operate an extermination business except under and in accordance with a licence of a prescribed class or unless exempt under the regulations.

Idem, assistant structural exterminator

(3) No person shall serve for a period of more than six months as an assistant to the holder of a licence to perform structural exterminations unless the person is licensed as an assistant exterminator or is exempt under the regulations.

Notice as to assistants to land exterminators or water exterminators

(4) No person shall serve for a period of more than seven days as an assistant to the holder of a licence to perform land exterminations or water exterminations unless the holder of the licence to perform the exterminations notifies the Director in writing or the person is exempt under the regulations. 1973, c. 25, s. 4.

Licence to sell, offer to sell or transfer

5. Unless exempt by the regulations, no person shall sell, offer to sell or transfer any pesticide unless the pesticide is classified by the regulations and except under and in accordance with a licence that shall be for such class and in respect of each premises on, in or from which the pesticide is or will be sold, offered for sale or transferred. 1973, c. 25, s. 5.

Where permit required

6.—(1) No person shall perform a land extermination or a structural extermination,

(*a*) by means of a pesticide;

(*b*) by means of a pesticide of a class; or

(*c*) under the conditions of use,

prescribed for the purpose of this section unless he is the holder of a permit for the land extermination or the structural extermination issued by the Director or he is exempt under the regulations.

Idem

(2) No person shall perform a water extermination unless he is the holder of a permit issued by the Director for the water extermination or he is exempt under the regulations. 1973, c. 25, s. 6.

Responsibility for acts or omissions

7. For the purpose of this Act and the regulations, every person is, with respect to any matter under this Act and the regulations, responsible for the acts or omissions of his employees and agents within the scope of their actual or apparent authority. 1973, c. 25, s. 7.

Liability insurance

8. An operator shall insure against liability or furnish a bond as provided for by the regulations. 1973, c. 25, s. 8.

Advisory Committee

9.—(1) The Committee known as the Pesticides Advisory Committee established under *The Pesticides Act*, being chapter 346 of the Revised Statutes of Ontario, 1970, and consisting of not fewer than ten members appointed by the Lieutenant Governor in Council one of whom may be designated by the Lieutenant Governor in Council as chairman and for whom the Lieutenant Governor in Council may appoint a person who is not a member as secretary, is continued.

Quorum

(2) Six members of the Committee constitute a quorum.

Functions

(3) The Committee shall,

(*a*) review annually the content and operation of this Act and the regulations and recommend changes or amendments therein to the Minister;

(*b*) inquire into and consider any matter the Committee considers advisable concerning pesticides and the control of pests, and any matter concerning pesticides and the control of pests referred to it by the Minister, and report thereon to the Minister;

(*c*) review publications of the Government of Ontario respecting pesticides and the control of pests, and report thereon to the Minister; and

(*d*) perform such other functions as the regulations prescribe. 1973, c. 25, s. 9.

Issuance of licence or permit

10.—(1) Subject to subsection 2, the Director shall issue or renew a licence under section 4 or 5, and subject to subsection 3, the Director shall issue a permit under section 6 to any person who applies for the licence or permit, as the case may be, in accordance with the regulations and who meets

the requirements of this Act and the regulations for the particular class of licence or for the permit applied for and who pays the fee prescribed for the licence or permit.

Revocation and refusal of licence

(2) Subject to section 13, the Director may refuse to issue or renew a licence or may suspend or revoke a licence where, in the opinion of the Director,

(*a*) the applicant or licensee is in contravention of this Act or the regulations;

(*b*) the licensee is in breach of any term or condition of the licence;

(*c*) the applicant or licensee or, where the applicant or licensee is a corporation, its officers or directors, is or are not competent to carry on the activity that would be or is authorized by the licence;

(*d*) the past conduct of the applicant or licensee or, where the applicant or licensee is a corporation, of any of its officers or directors, affords reasonable grounds for belief that the activity that would be or is authorized by the licence will not be carried on with honesty and integrity;

(*e*) the applicant or licensee does not possess or will not have available all premises, facilities and equipment necessary to carry on the activity authorized by the licence in accordance with this Act, the regulations and the licence;

(*f*) the applicant or licensee is not in a position to observe or carry out the provisions of this Act, the regulations and the licence;

(*g*) the licensee has been grossly negligent in carrying on the activity that is authorized by the licence; or

(*h*) the licensee has fraudulently misrepresented his services in performing an extermination or in carrying on an extermination business.

Revocation and refusal of permit

(3) The Director may refuse to issue or may cancel a permit, may impose terms and conditions in issuing or after issuing a permit and may alter the terms and conditions of a permit that has been issued where the Director is of the opinion, upon reasonable and probable grounds, that,

(*a*) the applicant or permittee is not competent to perform the extermination for which the permit is required;

(*b*) the applicant or permittee does not possess or will not have available all facilities and equipment necessary to perform the extermination in accordance with this Act, the regulations and the permit;

(*c*) there is or is likely to be danger to the health or safety of any person;

(*d*) there is or is likely to be harm or material discomfort to any person;

(*e*) there is or is likely to be impairment of the quality of the environment for any use that is being or is likely to be made of it;

(*f*) there is or is likely to be injury or damage to any property or to plant or animal life;

(*g*) any property or plant or animal life is or is likely to be rendered, directly or indirectly, unfit for use by man;

(*h*) a different method of control or extermination will or will likely be substantially as effective as the proposed extermination for which a permit is required under section 6 and will or will likely cause less impairment of the environment, if any, for any use that is being or is likely to be made of it or less harm to or adverse effect, if any, on any plant or animal life, man or property; or

(*i*) the use of the pesticide will not be or will not likely be effective or necessary to carry out the extermination. 1973, c. 25, s. 10.

Term of licence

11. A licence expires on the 15th day of February in the year next following the year in which it was issued. 1973, c. 25, s. 11.

Pesticides Appeal Board

12.—(1) The Lieutenant Governor in Council shall appoint a board, consisting of not more than seven members, to be known as the Pesticides Appeal Board who shall hold office during pleasure and none of whom shall be members of the public service in the employ of the Ministry.

(2) The Lieutenant Governor in Council may appoint one of the members of the Board as chairman. Chairman

(3) Four members of the Board constitute a quorum. Quorum

(4) Such employees as are required for the purposes of the Board may be appointed under *The Public Service Act*, 1973, c. 25, s. 12. Appointment of staff R.S.O. 1970, c. 386

13.—(1) Where the Director proposes, Proposal to refuse to issue licence, etc.

(*a*) to refuse to issue or renew a licence;

(*b*) to suspend or revoke a licence; or

(*c*) to make, amend or vary a control order,

he shall serve notice of his proposal, together with written reasons therefor, on the applicant, licensee or person to whom the Director intends to direct the control order.

(2) A notice under subsection 1 shall inform the applicant, licensee or person to whom the Director intends to direct the control order that he is entitled to a hearing by the Board if he mails or delivers to the Director and the Board, within fifteen days after the notice under subsection 1 is served on him, notice in writing requiring a hearing, and he may so require such a hearing. Notice

(3) Where an applicant, licensee or person to whom the Director intends to direct the control order does not require a hearing by the Board in accordance with subsection 2, the Director may carry out the proposal stated in his notice under subsection 1. Powers of Director where no hearing

(4) Where an applicant, licensee or person to whom the Director intends to direct the control order requires a hearing by the Board in accordance with subsection 2, the Board shall appoint a time and place for and hold the hearing and may by order direct the Director to carry out his proposal or refrain from carrying out his proposal and to take such action as the Board considers the Director ought to take in accordance with this Act and the regulations, and for such purposes the Board may substitute its opinion for that of the Director. Powers of Board where hearing

(5) The Board may extend the time for the giving of notice requiring a hearing by an applicant, licensee or person to whom the Director intends to direct a control order referred to in subsection 1, either before or after the expiration of such Extension of time for requiring hearing

time, where it is satisfied that there are reasonable grounds for applying for the extension and that there are *prima facie* grounds for granting relief to the applicant, licensee or person to whom the Director intends to direct the control order referred to in subsection 1, and the Board may give such directions as it considers proper consequent upon the extension.

Continuation of licence pending renewal

(6) Where, within the time prescribed therefor or, if no time is prescribed, before expiry of his licence, a licensee has applied for a renewal of his licence and paid the prescribed fee, his licence shall be deemed to continue,

(*a*) until the renewal is granted; or

(*b*) where he is served with notice that the Director proposes to refuse to grant the renewal, until the time for giving notice requiring a hearing by the Board has expired and, where a hearing is required, until the Board has made its decision.

Emergency notice

(7) Notwithstanding subsection 6, where the Director is of the opinion that an emergency exists by reason of,

(*a*) danger to the safety or health of any person;

(*b*) impairment or immediate risk of impairment of the environment for any use that is being or is likely to be made of it;

(*c*) injury or damage or immediate risk of injury or damage to property, or to plant or animal life;

(*d*) the rendering or immediate risk of rendering, directly or indirectly, of any property or plant or animal life unfit for use by man; or

(*e*) a failure by a licensee to have in force insurance against liability or to furnish or have in force a bond as required by section 8,

the Director, by a notice to a licensee or to a person to whom the Director intends to direct a control order, together with written reasons therefor, may refuse to renew, suspend or revoke a licence or make, amend or vary a control order and, notwithstanding that the licensee or person to whom the control order is directed requires a hearing by the Board, the licence shall not be deemed to continue or the suspension, revocation or the making, amendment or variation of the control order is effective upon the service of the notice, as the case requires.

(8) Where the Director refuses to issue or cancels a permit or imposes or alters a term or condition in a permit that has been issued, he shall forthwith thereafter serve or cause to be served notice of his decision, upon the applicant or permittee, together with written reasons therefor. Where permit cancelled or terms or conditions imposed or altered

(9) Where the Director issues a permit subject to a term or condition, refuses to issue or cancels a permit or imposes or alters a term or condition in a permit that has been issued and the applicant or permittee makes submissions to the Director, the Director, within three days after receiving the submissions, shall reconsider and vary, rescind or confirm his decision and shall serve or cause to be served notice of such variance, rescission or confirmation upon the applicant or permittee together with written reasons therefor and where the Director varies or rescinds his decision, he shall take such action as may be necessary to make the variation or rescission effective. Reconsideration

(10) A permit issued by the Director subject to a term or condition and a notice under subsection 8 shall inform the applicant or permittee that he is entitled to make submissions to the Director, in person or by an agent and by telephone or otherwise and that he is entitled to a hearing by the Board if he mails or delivers to the Director and the Board, within fifteen days after the notice under subsection 9 is served on him, notice in writing requiring a hearing and he may so make such submissions and so require such a hearing. Notice

(11) Notwithstanding the making of submissions by an applicant or a permittee pursuant to subsection 10, the issuance of a permit subject to a term or condition or the cancellation of a permit or the imposition or alteration of a term or condition in a permit that has been issued by the Director is effective upon the issuance of the permit or upon the service of the notice under subsection 8. Effect of service of notice

(12) Subsections 4 and 5 apply *mutatis mutandis* to a hearing by the Board required under subsection 10. 1973, c. 25, s. 13. Application of subss. 4, 5.

14. (1) The Director, the applicant, licensee, permittee or person to whom the Director intends to direct a control order who has required a hearing and such other persons as the Board may specify are parties to proceedings before the Board under section 13. Parties

(2) Notice of a hearing under section 13 shall afford to the applicant, licensee, permittee or person to whom the Director intends to direct a control order a reasonable Notice of hearing

opportunity to show or to achieve compliance before the hearing with all lawful requirements for the issue or retention of the licence or permit or to take such action as will preclude the necessity for making, amending or varying the control order.

(3) An applicant, licensee, permittee or person to whom the Director intends to direct a control order who is a party to proceedings under section 13 shall be afforded an opportunity to examine before the hearing any written or documentary evidence that will be produced or any report the contents of which will be given in evidence at the hearing. Examination of documentary evidence

(4) Members of the Board holding a hearing shall not have taken part before the hearing in any investigation or consideration of the subject-matter of the hearing and shall not communicate directly or indirectly in relation to the subject-matter of the hearing with any person or with any party or his representative except upon notice to and opportunity for all parties to participate, but the Board may seek legal advice from an adviser independent from the parties and in such case the nature of the advice shall be made known to the parties in order that they may make submissions as to the law. Members holding hearing not to have taken part in investigation, etc.

(5) The oral evidence taken before the Board at a hearing shall be recorded and, if so required, copies or a transcript thereof shall be furnished upon the same terms as in the Supreme Court. Recording of evidence

(6) The findings of fact of the Board pursuant to a hearing shall be based exclusively on evidence admissible or matters that may be noticed under sections 15 and 16 of *The Statutory Powers Procedure Act, 1971*. Findings of fact

1971, c. 47

(7) No member of the Board shall participate in a decision of the Board pursuant to a hearing unless he was present throughout the hearing and heard the evidence and argument of the parties and, except with the consent of the parties, no decision of the Board shall be given unless all members so present participate in the decision. Only members at hearing to participate in decision

(8) Documents and things put in evidence at the hearing shall, upon the request of the person who produced them, be released to him by the Board within a reasonable time after the matter in issue has been finally determined. 1973, c. 25, s. 14. Release of documentary evidence

15.—(1) Any party to proceedings before the Board may appeal from its decision or order on a question of law to the Supreme Court in accordance with the rules of court. Appeal to court

Record to be filed in court

(2) Where any party appeals from a decision or order of the Board, the Board shall forthwith file in the Supreme Court the record of the proceedings before it in which the decision was made, which, together with the transcript of the evidence if it is not part of the Board's record, shall constitute the record in the appeal.

Minister entitled to be heard

(3) The Minister is entitled to be heard by counsel or otherwise upon the argument of an appeal under subsection 1.

Appeal to Minister

(4) Any party to a hearing before the Board, within thirty days after receipt of the decision of the Board or within thirty days after final disposition of an appeal, if any, under subsection 1, may appeal in writing to the Minister on any matter other than a question of law and the Minister shall confirm, alter or revoke the decision of the Board as to the matter in appeal as he considers in the public interest. 1973, c. 25, s. 15.

Protection from personal liability

16.—(1) Except in the case of an application for judicial review or an action or proceeding that is specifically provided for with respect to a person referred to in this subsection in any Act or in a regulation under this or any other Act, no action or other proceeding for damages or otherwise shall be instituted against an employee of the Ministry, a member of the Board or the Committee or a Crown employee within the meaning of *The Public Service Act* who is a provincial officer or is acting under the direction of an employee of the Ministry, or such member or provincial officer for any act done in good faith in the execution or intended execution of any duty or authority under this Act or for any alleged neglect or default in the execution in good faith of any such duty or authority. 1974, c. 21, s. 3.

Crown not relieved of liability R.S.O. 1970, c. 365

(2) Subsection 1 does not, by reason of subsections 2 and 4 of section 5 of *The Proceedings Against the Crown Act*, relieve the Crown of liability in respect of a tort committed by an agent or servant of the Crown to which it would otherwise be subject and the Crown is liable under that Act for any such tort in a like manner as if subsection 1 had not been enacted. 1973, c. 25, s. 16 (2).

Provincial officers

17.—(1) The Minister may designate in writing one or more officers or employees of the Ministry or other persons as provincial officers for the purposes of this Act and the regulations. 1973, c. 25, s. 17 (1).

Powers of provincial officer

(2) For the purpose of the administration of this Act and the regulations, a provincial officer may, from time to time

and upon production of his designation, enter at any reasonable time any building, structure, machine, vehicle, land, water or air and make or require to be made such surveys, examinations, investigations, tests and inquiries, including examinations of books, records and documents, as he considers necessary, and may make, take and remove or may require to be made, taken or removed samples, copies or extracts. 1973, c. 25, s. 17 (2); 1974, c. 21, s. 4.

Order authorizing entry

(3) Where a provincial judge is satisfied, upon an *ex parte* application by a provincial officer, that there is reasonable ground for believing that it is necessary to enter any building, structure, machine, vehicle, land, water or air for the administration of this Act or the regulations, the provincial judge may issue an order authorizing a provincial officer to enter therein or thereon and to make or require to be made such surveys, examinations, investigations, tests and inquiries and to take the other actions that are mentioned in subsection 2, but every such entry, survey, examination, investigation, test, inquiry and other such action shall be made or taken between sunrise and sunset unless the provincial judge authorizes the provincial officer, by the order, to so act at another time.

Information

(4) Every person responsible for a pesticide or for a substance or thing containing a pesticide that is the subject of an investigation by a provincial officer, and every person who assists such a person, shall furnish such information as the provincial officer requires for the purpose of the investigation.

Obstruction of provincial officer

(5) No person who is responsible for a pesticide or for a substance or thing containing a pesticide or who assists such a person shall hinder or obstruct a provincial officer in the lawful performance of his duties or furnish a provincial officer with false information. 1973, c. 25, s. 17 (3-5).

Calling for assistance of member of police force

18. Whenever a provincial officer is required or empowered by this Act or the regulations to do or direct the doing of anything, such provincial officer may take such steps and employ such assistance as is necessary to accomplish what is required, and may, when obstructed in so doing, call for the assistance of any member of the Ontario Provincial Police Force or the police force in the area where the assistance is required and it is the duty of every member of a police force to render such assistance. 1973, c. 25, s. 18.

Matters confidential

19. Except as to information in respect of,

(*a*) impairment or potential impairment of the quality of the environment for any use that can be made of it; or

(*b*) harm or potential harm to or an adverse effect on any person, living thing or any property,

arising from or likely to arise from the handling, storage, use, disposal, transportation or display of a pesticide or a substance or thing containing a pesticide, every provincial officer shall preserve secrecy in respect of all matters that come to his knowledge in the course of an examination, test or inquiry of or into any matter under this Act or the regulations and shall not communicate any such matter to any person except,

(*c*) as may be required in connection with the administration of this Act and the regulations or any proceedings under this Act or the regulations;

(*d*) to his counsel; or

(*e*) with the consent of the person who is responsible for the handling, storage, use, disposal, transportation or display of the pesticide, substance or thing. 1973, c. 25, s. 19.

Stop order

20.—(1) Where the Director or a provincial officer is of the opinion, upon reasonable and probable grounds, that an emergency exists by reason of,

(*a*) danger to the health or safety of any person;

(*b*) impairment or immediate risk of impairment of the quality of the environment for any use that is being or is likely to be made of it;

(*c*) injury or damage or immediate risk of injury or damage to any property or to any plant or animal life; or

(*d*) the rendering or the immediate risk of rendering, directly or indirectly, any property or plant or animal life unfit for use by man,

consequent upon the handling, storage, use, disposal, transportation or display of a pesticide or a substance or thing containing a pesticide, the Director or provincial officer, as the case may be, may make an oral or written stop order directed to the person responsible for the pesticide or the substance or thing containing the pesticide ordering such person to stop immediately the handling, storage, use, disposal, transportation or display of the pesticide or the substance or thing containing the pesticide either permanently or for a specific period of time.

Immediate appeal

(2) A person who is affected by a stop order made by a provincial officer under subsection 1 may appeal therefrom in person or by an agent and by telephone or otherwise to the Director and the Director, after receiving the submissions of the person and of the provincial officer, shall vary, rescind or confirm the stop order of the provincial officer.

Written reasons for order

(3) Where the Director makes a stop order or varies or confirms a stop order pursuant to subsection 2, the Director shall forthwith thereafter serve or cause to be served a written copy of the stop order or a written copy of the stop order as varied or confirmed, as the case requires, together with written reasons therefor, upon the person to whom the stop order or the stop order as varied or confirmed is directed.

Notice

(4) A stop order, or a stop order as varied or confirmed, under subsection 3 shall inform the person to whom it is directed that he is entitled to a hearing by the Board if he mails or delivers to the Director and the Board, within fifteen days after a copy of the stop order, or the stop order as varied or confirmed, under subsection 3, is served on him, notice in writing requiring a hearing and he may so require such a hearing.

Effect of stop order

(5) Notwithstanding that an appeal is taken against a stop order, the stop order is effective at and from the time it is communicated to the person to whom it is directed until confirmed, varied or rescinded on appeal and such person shall comply with the stop order immediately.

Appeal to Board

(6) Where the Director has made a stop order or has varied or confirmed upon appeal to the Director a stop order made by a provincial officer, any person to whom the order is directed may, by written notice mailed to or served upon the Director and the Board within fifteen days after service upon him of a copy of the stop order or of the stop order as varied or confirmed, as the case requires, require a hearing by the Board.

Powers of Board where hearing

(7) Where a person to whom a stop order is directed requires a hearing by the Board in accordance with subsection 6, the Board shall appoint a time and place for and hold the hearing and the Board may by order confirm, alter or rescind the order of the Director and for such purposes the Board may substitute its opinion for that of the Director.

Parties

(8) The Director, the person who has required the hearing and such other persons as the Board may specify are parties to proceedings before the Board under this section.

(9) Subsection 5 of section 13, subsections 2, 3, 4, 5, 6, 7 and 8 of section 14 and section 15 apply *mutatis mutandis* to proceedings under this section. Application of ss. 13 (5), 14 (2-8) and 15

(10) The Director, by an order, may rescind a stop order and in such case shall serve or cause to be served a copy of the rescinding order upon the person to whom the stop order was directed. 1973, c. 25, s. 20. Revocation of stop order

21.—(1) Where the handling, storage, use, disposal, transportation or display of a pesticide or a substance or thing containing a pesticide, Control order

(*a*) causes or is likely to cause impairment of the quality of the environment for any use that is being or is likely to be made of it;

(*b*) causes or is likely to cause injury or damage to property or to plant or animal life;

(*c*) causes or is likely to cause harm or material discomfort to any person;

(*d*) adversely affects or is likely to affect adversely the health of any person;

(*e*) impairs or is likely to impair the safety of any person;

(*f*) renders or is likely to render, directly or indirectly, any property or plant or animal life unfit for use by man,

the Director, subject to section 13, may make a control order directed to the person responsible for the pesticide or the substance or thing containing the pesticide.

(2) The Director, in a control order, may order the person to whom the order is directed to, Content of control order

(*a*) limit or control the rate of deposit, addition, emission or discharge of a pesticide or a substance or thing containing a pesticide into the environment in accordance with the directions set out in the order;

(*b*) stop the deposit, addition, emission or discharge of a pesticide or a substance or thing containing a pesticide into the environment,

(i) permanently,

(ii) for a specified period of time, or

(iii) in the circumstances set out in the order; and

(*c*) comply with any directions set out in the order relating to the manner in which a pesticide or a substance or thing containing a pesticide or the container of either of them may be handled, stored, used, disposed of, transported or displayed.

Amendment of control order

(3) The Director, under any of the circumstances set out in subsection 1 and in accordance with subsection 2, by a further order, may amend or vary a control order and sections 13, 14 and 15 apply *mutatis mutandis*.

Revocation of control order

(4) The Director, by an order, may rescind a control order and in such case shall serve or cause to be served a copy of the rescinding order upon the person to whom the control order was directed. 1973, c. 25, s. 21.

When Director to be notified

22. Every person who deposits, adds, emits or discharges a pesticide or a substance or thing containing a pesticide in or into the environment out of the normal course of events that,

(*a*) causes or is likely to cause impairment of the quality of the environment for any use that can be made of it;

(*b*) causes or is likely to cause injury or damage to property or to plant or animal life;

(*c*) causes or is likely to cause harm or material discomfort to any person;

(*d*) adversely affects or is likely to adversely affect the health of any person;

(*e*) impairs or is likely to impair the safety of any person; or

(*f*) renders or is likely to render, directly or indirectly, any property or plant or animal life unfit for use by man,

shall forthwith notify the Director. 1973, c. 25, s. 22.

Minister may order repair of damage

23.—(1) Where any person deposits, adds, emits or discharges or causes or permits the deposit, addition, emission or discharge of a pesticide or a substance or thing containing a

pesticide that causes or is likely to cause injury or damage to or impairment of,

(*a*) the quality of the environment for any use that is being or is likely to be made of it;

(*b*) any property or water;

(*c*) plant or animal life; or

(*d*) a person,

the Minister, where he is of the opinion that it is in the public interest to do so, may order the person responsible for the pesticide or the substance or thing containing the pesticide to do all things and take all steps within such time or times as may be specified in the order for the purpose of preventing or repairing, as the case requires, such injury or damage or impairment or to restore such quality.

Cleaning and decontamination

(2) Every person responsible for a pesticide or a substance or thing containing a pesticide shall take such measures and do such things within such time or times with respect to the cleaning and decontamination of the environment, or any plant or animal life, substance or thing that has come into contact with a pesticide by any means other than in accordance with this Act and the regulations or a licence, permit or order thereunder as may be prescribed.

Idem

(3) No person shall use the environment or any plant or animal life, substance or thing that has come into contact with a pesticide by any means other than in accordance with this Act and the regulations or a licence, permit or order thereunder unless the cleaning and decontamination thereof has been completed in the prescribed manner or has been approved by the Director in writing. 1973, c. 25, s. 23.

Order binds successor or assignee

24.—(1) An order of the Minister, the Director or a provincial officer under this Act is binding upon the successor or assignee of the person to whom it is directed.

Index record

(2) The Ministry shall maintain an alphabetical index record of the names of all persons to whom orders are directed under this Act.

Removal of name from index record

(3) When an order has expired or is rescinded, the Ministry shall remove from the index record the name of the person to whom the order is directed.

Search of index record

(4) The Ministry shall, upon the request of any person, make a search of the index record and inform the person

making the request as to whether or not the name of a particular person appears in the index record and shall permit inspection of any order relating to that person. 1973, c. 25, s. 24.

The Crown

25. This Act binds the Crown. 1973, c. 25, s. 25.

Licences or permits not transferable

26. A licence or a permit under this Act is not transferable. 1973, c. 25, s. 26.

Exemption

27. Where, in the opinion of the Director, it is in the public interest to do so, the Director may exempt an applicant for a licence issued by the Director pursuant to section 5 or the holder of such a licence from any provision of the regulations and issue a licence to the applicant or modify the licence of the licensee, as the case may be, upon such terms and conditions, or alter or revoke the terms and conditions, as the Director considers necessary. 1973, c. 25, s. 27.

Regulations

28. The Lieutenant Governor in Council may make regulations,

1. prescribing classes of licences and the requirements for licences and renewals;

2. exempting any person or class of persons from this Act or the regulations or any provision thereof and prescribing terms and conditions attaching to any such exemption;

3. providing for the issue and renewal of licences and prescribing fees therefor;

4. providing for the issue of permits, prescribing fees therefor and the requirements therefor;

5. prescribing terms and conditions with respect to sales, offers to sell, transfers or premises in, on or from which sales, offers to sell or transfers of a pesticide are or will be made that shall attach to any class of licence;

6. providing for the examination of applicants for permits and licences and renewals of licences, and prescribing fees for such examinations;

7. providing for the appointment of examiners for applicants for licences and permits, the period for which such appointments may be made and the remuneration of examiners;

8. requiring applicants for licences to undergo medical examinations;

9. prescribing the procedures, conditions and notices for exterminations and for the airing out of buildings, structures and vehicles;

10. fixing the amount and type of insurance or bond that shall be carried or furnished by operators and prescribing the form, requirements and terms thereof;

11. prescribing pesticides, classes of pesticides and conditions of use for the purpose of section 6;

12. prescribing that a type or class of structural extermination may be deemed a land extermination and prescribing that a type or class of land extermination may be deemed a structural extermination for the purpose of this Act and the regulations;

13. permitting any class of operator or exterminator to perform or to undertake to perform any extermination for which the members of the class are not licensed and prescribing the conditions that shall attach to the permission;

14. exempting any machine, apparatus, equipment, or class thereof, from this Act or the regulations, or any provision thereof;

15. exempting any type or class of building, vehicle or structure from this Act or the regulations or any provision thereof;

16. excluding any land or water from the operation of this Act or the regulations or any provision thereof;

17. regulating or prohibiting the installation, operation, maintenance and use of any machine, apparatus or equipment used for extermination;

18. governing the signs, marking or other identification of vehicles or machines used in exterminations;

19. regulating the construction of any enclosed space or vault in which movable property may be placed during the periods of extermination and airing out;

20. prescribing functions, practices and procedures, tenure of office and remuneration of the Committee;

21. providing for the remuneration and expenses of members of the Pesticides Appeal Board;

22. prescribing forms and providing for their use for the purposes of this Act;

23. governing, regulating or prohibiting the use, handling, storage, display or disposal of pesticides;

24. classifying pesticides and prohibiting or regulating the sale, offering for sale or transfer of any pesticide or class of pesticides;

25. prohibiting the holders of any class of licence from using any designated pesticide or class of pesticides;

26. regulating the type of containers and the labelling of containers for pesticides, other than the containers in which pesticides are sold or offered for sale;

27. regulating the disposal of containers of pesticides;

28. prescribing the records to be kept and returns to be made by licensees;

29. exempting any plant or animal life, organism, substance or thing or any class of any of them or any quantity or concentration of any organism or substance from this Act or the regulations or any provision thereof;

30. respecting premises on, in or from which any pesticide or class of pesticide is sold, offered for sale or transferred;

31. regulating and controlling, for the purpose of preventing or reducing the contamination by pesticides of the environment, property, plant or animal life, or of any person, the transportation of any designated pesticide or class of pesticides by any vehicle operated on any highway or road or the transportation of any designated pesticide or class of pesticides together with any commodity or class of commodities by a vehicle operated on any highway or road;

32. prohibiting the transportation of any designated pesticide or class of pesticides together with any commodity or class of commodity by a vehicle operated on any highway or road;

33. prescribing the records to be kept by persons responsible for the transportation of any designated pesticide or class of pesticides by a vehicle operated on a highway or road;

34. requiring, regulating or prohibiting the removal or disposal of any substance or thing that has come into contact with any pesticide by any means other than in accordance with this Act and the regulations or a licence, permit or order thereunder;

35. requiring and prescribing measures to be taken and things to be done with respect to the cleaning and decontamination of the environment or any plant or animal life, substance or thing that has come into contact with a pesticide by any means other than in accordance with this Act and the regulations or a licence, permit or order thereunder and the time or times within which such measures shall be taken and things done. 1973, c. 25, s. 28.

Scope of regulations

29.—(1) Any regulation may be general or particular in its application and may be limited as to time or place or both.

Adoption of codes in regulations

(2) Any regulation may adopt by reference, in whole or in part, with such changes as the Lieutenant Governor in Council considers necessary, any code, formula, standard or procedure, and may require compliance with any code, formula, standard or procedure so adopted. 1973, c. 25, s. 29.

Fees for copies

30. The Minister may charge and collect for payment to the Treasurer of Ontario such fees as the Minister considers proper for all copies of pamphlets, brochures, documents, maps, plans or drawings supplied by the Ministry. 1973, c. 25, s. 30; 1974, c. 21, s. 5.

Service

31.—(1) Any notice, order, decision or other document required to be given, served or delivered under this Act or the regulations is sufficiently given, served or delivered if delivered personally or sent by registered mail addressed to the person to whom it is required to be given, served or delivered at the latest address for service appearing on the records of the Ministry or, where there is no address for service so appearing, at the address, if any, last known to the Director.

When service deemed made

(2) Where service is made by registered mail pursuant to subsection 1, the service shall be deemed to be made on the fifth day after the day of mailing unless the person on whom service is being made establishes that he did not, acting in

good faith, through absence, accident, illness or other cause beyond his control, receive the notice, order, decision or other document until a later date. 1973, c. 25, s. 31.

Enforcement of performance of things required to be done

32. Where the Minister or the Director has authority to order or require that any matter or thing be done, the Minister may order that, in default of its being done by the person ordered or required to do it, such matter or thing shall be done at the expense of such person, and the Minister may recover the cost of doing it, with costs, by action in a court of competent jurisdiction as a debt due to the Crown by such person. 1973, c. 25, s. 32.

False information

33. No person shall knowingly give false information in any application, return or statement made to the Minister, a provincial officer or any employee of the Ministry in respect of any matter under this Act or the regulations. 1974, c. 21, s. 6.

Offence

34. Every person, whether as principal or employer or as agent or employee of either of them, who contravenes any provision of this Act or the regulations or fails to comply with an order or a term or condition of a licence or permit made or issued under this Act is guilty of an offence and on summary conviction is liable on a first conviction to a fine of not more than $5,000 for every day or part thereof upon which the offence occurs or continues and upon a second or subsequent conviction to a fine of not more than $10,000 for every day or part thereof upon which the offence occurs or continues. 1973, c. 25, s. 34.

Multiple information

35. An information in respect of any matter under this Act may be for one or more offences and no information, summons, warrant, conviction or other proceeding in any prosecution is objectionable or insufficient by reason of the fact that it relates to two or more offences. 1973, c. 25, s. 35.

Certificates etc., as evidence

36. In any prosecution, proceeding or hearing under this Act or the regulations, the production of,

(*a*) a certificate or report of an analyst in the employ of the Crown in right of Ontario designated by the Minister as to the analysis, ingredients, quality, quantity or temperature of any material, whether solid, liquid or gas or any combination of them; or

(*b*) a notice, licence, permit, order, certificate, consent or approval purporting to be signed by the Minister or the Director, or any certified copy thereof,

is *prima facie* evidence of the facts stated therein and of the authority of the person making the report, notice, licence, permit, order, certificate, consent or approval without any proof of appointment or signature. 1973, c. 25, s. 36.

Proceedings to prohibit continuation or repetition of contravention

37.—(1) Where any provision of this Act or the regulations or any direction, order, licence or permit made, served, delivered or issued by the Minister or the Director under this Act is contravened, notwithstanding any other remedy or any penalty imposed, the Minister may apply to a judge of the Supreme Court by originating motion for an order prohibiting the continuation or repetition of the contravention or the carrying on of any activity specified in the order that, in the opinion of the court, will or will likely result in the continuation or repetition of the contravention by the person committing the contravention, and the judge may make the order and it may be enforced in the same manner as any other order or judgment of the Supreme Court.

Rescission or variation of order

(2) Any person against whom an order has been made under subsection 1 may apply to a judge of the Supreme Court for an order varying or rescinding such order. 1973, c. 25, s. 37.

Conflict

38. Where a conflict appears between any provision of this Act or the regulations and any other Act or regulation in a matter related to pesticides and the control of pests, the provision of this Act or the regulations shall prevail. 1973, c. 25, s. 38.

Applications, etc., deemed under this Act

39. Every application, examination, licence, permit, order, regulation, prosecution, proceeding or hearing that is made, taken or deemed to be in effect under Part VI of *The Environmental Protection Act, 1971* and under *The Pesticides Act* shall continue to subsist and shall be deemed to be in effect under this Act in accordance with the terms thereof or until amended or revoked under this Act or the regulations. 1973, c. 25, s. 39.

1971, c. 86

R.S.O. 1970, c. 346

Repeals

40. The following are repealed:

1. *The Pesticides Act*, being chapter 346 of the Revised Statutes of Ontario, 1970.
2. Section 66 of *The Civil Rights Statute Law Amendment Act, 1971*, being chapter 50.
3. Section 71 of *The Government Reorganization Act, 1972*, being chapter 1.

Commencement

***41.** This Act comes into force on a day to be named by the Lieutenant Governor by his proclamation.

Short title

42. This Act may be cited as *The Pesticides Act, 1973*.

***NOTE: The Act was proclaimed in force as of May 31st, 1974 and the amendments to the Act by 1974, c. 21 were proclaimed in force as of July 4th, 1974.**

ONTARIO REGULATION 618/74

under The Pesticides Act

GENERAL

INTERPRETATION

1. In this Regulation,

(*a*) "agricultural or forestry production" means the production of plants, animals, or both, by an agriculturist;

(*b*) "agriculturist" means a person who uses farm land for agricultural or forestry production;

(*c*) "Crown employee" means a Crown employee within the meaning of *The Public Service Act*;

(*d*) "drainage ditch" means a man-made watercourse, added to the natural land drainage system, primarily to collect and convey water and which, for some period each year, does not contain flowing water;

(*e*) "farm land" means land, or a farm structure, or both, used for agricultural or forestry production where it comprises,

(i) at least eleven acres that are contiguous except for division by a street, road, railway or water, or

(ii) less than eleven acres, if there has been an average gross annual revenue over the three years immediately preceding or a gross revenue in the year immediately preceding the date of the sale or proposed sale at retail of a pesticide for use on the land or the farm structure of not less than $2,000 from the sale of the products of agricultural or forestry production, or both, produced on the land or farm structures, or both;

(*f*) "farm structure" means a structure used for agricultural or forestry production but does not include a structure used primarily for storage or human habitation;

(*g*) "fire resistance rating" means the rating assigned to a component or assembly from a test of the time of fire resistance of a representative specimen conducted in accordance with,

(i) Underwriters' Laboratories of Canada Standard for Fire Tests of Building Construction and Materials, ULC 263, 1971, or

(ii) Underwriters' Laboratories of Canada Standard for Fire Tests of Door Assemblies, ULC 10 (b), 1970;

(*h*) "fire separation" means a barrier against the spread of fire and smoke;

(*i*) "herbicide" means any pesticide used for the destruction or control of any vegetation;

(*j*) "hormone type herbicide" means any pesticide containing,

(i) 2,4-D,

(ii) 2,4-DB,

(iii) 2,4,5-T,

(iv) mecoprop,

(v) fenoprop,

(vi) MCPA,

(vii) MCPB,

(viii) dichlorprop,

(ix) dicamba,

(x) TBA,

(xi) fenac, or

(xii) picloram;

(*k*) "limited wholesale vendor" means a person who may sell at wholesale only those pesticides mentioned in section 89 in accordance with the provisions of section 89;

(*l*) "mammalian pest" means any rat, mouse, raccoon, rabbit, porcupine, squirrel, groundhog, mole or skunk;

(*m*) "retail vendor" means a person who sells at retail;

(*n*) "sell at retail" means sell, transfer or offer to sell or transfer to a purchaser or a transferee for the purpose of use and not for resale or re-transfer;

(*o*) "sell at wholesale" means sell, transfer or offer to sell or transfer, other than at retail;

(*p*) "store for sale at retail" means keep for sale at retail in an area that is separated from that part of the premises in which the retail vendor normally transacts business;

(*q*) "store for sale at wholesale" means keep for sale at wholesale in an area that is separated from that part of the premises in which the wholesale vendor or limited wholesale vendor normally transacts business;

(*r*) "warning gas" means a gas that immediately identifies its presence by its effect on the senses when a person is exposed to it;

(*s*) "wholesale vendor" means a person who sells at wholesale. O. Reg. 618/74, s. 1.

THE PESTICIDES ADVISORY COMMITTEE

2.—(1) The term of office of a member of the Committee other than a member who is a Crown employee is three years.

(2) Every vacancy on the Committee caused by the death, resignation or incapacity of a member may be filled by the appointment of a member for the remainder of the term of the member. O. Reg. 618/74, s. 2.

3.—(1) The Committee shall meet,

(*a*) at the request of the Minister;

(*b*) at the request of the chairman; or

(*c*) at the request of any three members of the Committee.

(2) The secretary of the Committee shall,

(*a*) keep a record of all business transacted at a meeting of the Committee;

(*b*) have the custody of all reports, submissions and correspondence received by the Committee; and

(*c*) produce the records and other documents mentioned in clause *b* for inspection when requested by the Minister or an officer of the Ministry designated by him. O. Reg. 618/74, s. 3.

4. A member of the Committee, other than a member who is an officer of the Crown, shall be paid,

(*a*) $135 if he is the chairman, or

(*b*) $105 if he is not the chairman, and

(*c*) his necessary travelling and other expenses,

for each day that he is engaged upon the work of the Committee. O. Reg. 618/74, s. 4.

APPLICATION FOR LICENCE

5. An application for a type of licence mentioned in Column 1 of the following Table or renewal thereof shall be in the form set opposite thereto in Column 2.

TABLE

	Column 1	Column 2
Item	Type of Licence	Form of Application for Licence or Renewal thereof
1	Operator (all classes)	2
2	Structural Exterminator (all classes)	1
3	Land Exterminator (all classes)	1
4	Water Exterminator (all classes)	1
5	Wholesale Vendors (all classes)	8
6	Retail Vendors (all classes)	9

O. Reg. 618/74, s. 5.

GENERAL REQUIREMENTS FOR EXTERMINATOR'S LICENCE

6.—(1) Subject to subsection 4, an applicant for any class of exterminator's licence shall submit with his application at least two letters from reputable persons attesting to his good reputation who have known the applicant for at least one year immediately prior to the application.

(2) An applicant for any class of exterminator's licence shall,

(*a*) be physically fit for the purpose of performing exterminations and provide a certificate to this effect from a legally qualified medical practitioner;

(*b*) submit to an examination referred to in section 11 and be recommended by the

examiners as competent to hold the class of licence for which he has applied;

(c) have grade 10 standing or other qualifications considered by the Director to be equivalent thereto;

(d) be at least sixteen years of age.

(3) Subject to subsection 4, in addition to the requirements mentioned in subsections 1 and 2, an applicant for any class of structural exterminator's licence shall meet the requirements of section 29.

(4) An applicant for any class of exterminator's licence to perform exterminations on his own premises or the premises of his employer is exempt from subsection 1. O. Reg. 618/74, s. 6.

FEES

7.—(1) The fee for each class of an operator's licence, or a renewal of any of them, is $15.

(2) The fee for each class of an exterminator's licence, or a renewal of any of them, is $10.

(3) The fee for a wholesale vendor's licence, or a renewal thereof, is $100.

(4) The fee for a limited wholesale vendor's licence, or a renewal thereof, is $20.

(5) The fee for a retail vendor's licence, Class 1, or a renewal thereof, is $20.

(6) The fee for a retail vendor's licence, Class 2, or a renewal thereof, is $15.

(7) The fee for a retail vendor's licence, Class 3, or a renewal thereof, is $10.

(8) The fee for a licence, or a renewal thereof, shall be submitted with the application for the licence or renewal. O. Reg. 618/74, s. 7.

8.—(1) An application for a licence mentioned in Column 1 of the Table of section 5, or a renewal thereof, shall be made to the Director.

(2) An application for a renewal of a licence shall be made in the case of,

(a) an operator's licence, at least thirty days prior to the expiry date of the licence;

(b) an exterminator's licence, at least thirty days prior to the expiry date of the licence; and

(c) a vendor's licence, at least sixty days prior to the expiry date of the licence. O. Reg. 618/74, s. 8.

EXAMINERS

9.—(1) The Director shall appoint the examiners of applicants for licences.

(2) The term of an appointment as an examiner is three years and is subject to cancellation by the Director.

(3) An examiner, other than one who is a Crown employee, shall be paid $75 and his necessary travelling and other expenses for each day that he is engaged upon his work as an examiner. O. Reg. 618/74, s. 9.

EXAMINATIONS

10.—(1) The fee for an examination for each class of licence is $5 and shall be submitted together with the application.

(2) An applicant who fails to attend a scheduled examination and fails to notify the Director of his inability to attend at least forty-eight hours before the time fixed for the examination shall forfeit his examination fee and be required to pay a new examination fee.

(3) Notwithstanding subsection 2, an applicant who fails to attend a scheduled examination three times within a six-month period shall forfeit his examination fee and, if required by the Director, shall submit a new application for the licence.

(4) An applicant for a licence shall be given at least seven days notice of the date, time and place fixed for his examination.

(5) No applicant shall be permitted to try an examination for a licence as an operator or for the same class of exterminator's licence more than twice in any period of twelve months. O. Reg. 618/74, s. 10.

EXTERMINATOR'S LICENCE

11.—(1) An oral examination for any class of exterminator's licence shall be given by at least two examiners.

(2) An examination of an applicant for a licence to perform any class of structural exterminations shall be an oral examination.

(3) An examination of an applicant for a licence to perform any class of land or water exterminations may be a written or oral examination, or both.

(4) At least one examiner or a person designated by the examiners shall be present at a written examination.

(5) The examiners shall examine the applicant for any class of exterminator's licence on his knowledge of,

(a) the provisions of the Act and the regulations thereunder;

(b) the toxicity and hazard, first-aid and antidotes and the forms and methods of application of the pesticide or pesticides that the prescribed class of licence for which the applicant is applying shall entitle him to use; and

(c) the identification, life history, habits, characteristics and control of pests that may be subject to extermination. O. Reg. 618/74, s. 11.

12.—(1) The Director may require an applicant for renewal of any class of exterminator's licence to pass an examination before renewing the licence.

(2) When so required by the Director, an applicant for renewal of any class of exterminator's licence shall provide the Director with a report of a legally qualified medical practitioner establishing that the applicant is physically fit for the purpose of performing exterminations. O. Reg. 618/74, s. 12.

OPERATORS' LICENCES

13.—(1) An operator's licence, of the class prescribed in Column 1 of the following Table, is authority to operate an extermination business set out in Column 2 thereof.

TABLE

	Column 1	Column 2
Item	Class of Operator's Licence	Extermination Business
1	1	Structural, land and water exterminations
2	2	Structural and land exterminations
3	3	Structural and water exterminations
4	4	Land and water exterminations
5	5	Structural exterminations
6	6	Land exterminations
7	7	Water exterminations

(2) Every operator's licence shall have endorsed thereon the class of operator's licence for which it has been issued. O. Reg. 618/74, s. 13.

14.—(1) An applicant for any class of operator's licence shall submit with his application at least two letters from reputable persons attesting to his good reputation and financial responsibility who have known the applicant for at least one year immediately prior to the application.

(2) Where the applicant is a partnership or corporation it shall designate on Form 2 the partner, director or officer who is the Official Representative of the partnership or corporation, as the case may be, whose duty it is to ensure that the Act and the regulations thereunder are complied with and who shall sign the application.

(3) A partnership or corporation may have more than one Official Representative in which case each Official Representative shall,

(a) sign the application; and

(b) have the duty of ensuring the Act and regulations thereunder are complied with in respect to all of the operator's business.

(4) Every operator shall notify the Director of any change in the information furnished in Form 2 within ten days after the effective date of the change. O. Reg. 618/74, s. 14.

15.—(1) Upon receiving the application in Form 2, the Director may require the applicant to undergo an oral examination.

(2) If an examination mentioned in subsection 1 is required by the Director, the notice mentioned in subsection 4 of section 10 shall set out any information or evidence in respect of the qualifications of the applicant to operate an extermination service that the Director may require him to produce.

(3) Where the applicant is a partnership or corporation, any examination required under subsection 1 shall be taken by the Official Representative or Representatives of the applicant designated under subsection 2 or 3 of section 14, as the case may be.

(4) At least three examiners shall examine an applicant for an operator's licence. O. Reg. 618/74, s. 15.

16. An applicant for any class of operator's licence or a renewal thereof shall satisfy the Director that he is at least eighteen years of age or, in the case of a corporation or partnership, that the Official Representative is at least eighteen years of age and, in the case of a partnership, at least one of the partners is at least eighteen years of age. O. Reg. 618/74, s. 16.

17.—(1) Subject to subsection 2, the Director may require an applicant for any class of operator's licence or renewal thereof to appear before him and submit evidence and information respecting the qualifications of the applicant and any other person involved in the control and management of the extermination business.

(2) At least seven days before the appearance mentioned in subsection 1 the applicant shall be given notice of,

(*a*) the date, time and place fixed for his appearance before the Director; and

(*b*) the particulars of the information and evidence that the Director may require the applicant to produce. O. Reg. 618/74, s. 17.

18.—(1) Every operator shall employ at least one licensed exterminator for every four or fewer employees who assist in performing exterminations.

(2) An operator who carries on business at more than one location shall,

(*a*) have a licensed exterminator in charge at each location who is normally present at least once during each business day;

(*b*) notify the Director of the address of each location and the name of the licensed exterminator in charge at each location and

(*c*) notify the Director of any change in the information furnished under clause *b* within ten days after the effective date of the change. O. Reg. 618/74, s. 18.

INSURANCE REQUIREMENTS

19.—(1) An operator shall carry insurance in a form approved by the Superintendent of Insurance of the Province of Ontario with respect to the liability of the operator and all of his employees arising out of the extermination business, for death, injury or property damage.

(2) Subject to subsection 3, where an operator carries on an extermination business the liability coverage provided by the contract of insurance required under subsection 1 shall be in an amount of not less than $25,000 to each employee of the operator provided that the contract of insurance may limit the insurer's liability under the contract of insurance arising out of any one incident to $50,000.

(3) Where an operator furnishes satisfactory evidence that his business is subject to Part I of *The Workmen's Compensation Act* and that he is paying all amounts due under Part I of *The Workmen's Compensation Act* as they fall due then so long as he continues to pay all such amounts as they fall due and to comply with all the provisions of *The Workmen's Compensation Act* he is exempt from subsection 2.

(4) Where an operator carries on an extermination business for which he is the holder of a Class 1, 2, 3 or 5 operator's licence, the contract of insurance required under subsection 1 shall provide coverage in an amount of not less than,

(*a*) $300,000 with respect to the death of or bodily injury to any person not an employee of the operator for each such person provided that the contract of insurance may limit the insurer's liability under the contract of insurance arising out of any one incident to $500,000; and

(*b*) $200,000 with respect to property damage arising out of any one incident.

(5) Where an operator carries on an extermination business for which he is the holder of a Class 4, 6 or 7 operator's licence and is not the holder of a Class 1, 2, 3 or 5 operator's licence, the contract of insurance required under subsection 1 shall provide coverage in an amount of not less than,

(*a*) $100,000 with respect to the death or bodily injury to any person not an employee of the operator for each such person provided that the contract of insurance may limit the insurer's liability under the contract of insurance arising out of any one incident to $200,000; and

(*b*) $10,000 with respect to property damage arising out of any one incident.

(6) The contract of insurance required under subsection 1 may provide that the insured shall be responsible for the first $250 of each claim for which an amount of coverage is required under subsections 4 and 5.

(7) Where a contract of insurance required by subsection 1 limits the insurer's liability to an aggregate amount except as permitted by subsections 2, 4 and 5, the contract shall contain a provision requiring the insurer to notify the Director of all sums of money paid by reason of the liability of the insured.

(8) Where an operator has a contract of insurance which is required to have the provision referred to in subsection 7, the operator shall advise the Director of all sums of money paid under the contract of insurance.

(9) Every contract of insurance furnished in satisfaction of the requirements of this section shall provide that,

(*a*) the insurer shall give fifteen days notice by registered mail to the Director prior to any cancellation of the contract by the insurer or the insured taking effect;

(*b*) the contract of insurance shall remain in full force and effect until the notice provided for in clause *a* has expired; and

(*c*) the insurer shall pay any claims covered by the contract of insurance to any person making such a claim who has recovered a judgment thereon notwithstanding any act or default of the insured which might make the policy void or give the insurer a defence to an action by the insured provided that such provision shall not limit the insurer's right to recover any payment so made from the insured. O. Reg. 618/74, s. 19.

CLASSES OF PESTICIDES

20. For the purposes of the Act and this Regulation pesticides are classified as follows:

(*a*) the pesticides set out in Schedule 1 are classified as Schedule 1 pesticides;

(*b*) the pesticides set out in Schedule 2 are classified as Schedule 2 pesticides;

(*c*) the pesticides set out in Schedule 3 are classified as Schedule 3 pesticides;

(*d*) the pesticides set out in Schedule 4 are classified as Schedule 4 pesticides; and

(*e*) the pesticides set out in Schedule 5 are classified as Schedule 5 pesticides. O. Reg. 618/74, s. 20.

21.—(1) Subject to subsection 3, no person shall use any pesticide in an extermination unless it is registered under the *Pest Control Products Act* (Canada) and assigned a registration number under that Act and is classified under this Regulation.

(2) Subject to subsection 3, no person shall use in an extermination any pesticide,

(*a*) for any purpose other than that for which the pesticide is sold or represented;

(*b*) in any manner other than that designated on the conditions of registration; and

(*c*) for any purpose other than that for which the pesticide is authorized for use under this Regulation.

(3) Where a person uses a pesticide in a structural or land extermination for the purpose of research or a test,

(*a*) by a Research Centre, University or other institution of learning, a professional researcher from industry or the Government of Ontario, the Government of Canada or a person under the supervision or authority of a professional researcher from industry or the Government of Ontario or the Government of Canada, on the premises of such centre or institution or on experimental land obtained for this purpose; or

(*b*) where approval of the extermination has been obtained from the Director at least seven days before the extermination is performed,

he is exempt from subsections 1 and 2.

(4) Where an extermination is performed under subsection 3, the crop, if any, remaining at the conclusion of the research or test shall be destroyed by the person responsible for the extermination unless an alternative method for the disposal of the crop is approved by the Director.

(5) Notwithstanding subsection 1 and subject to subsections 2 and 7, an agriculturist may use on his farm land an imported pesticide that is identical with both a pesticide registered under the *Pest Control Products Act* (Canada) and a pesticide classified under this Regulation.

(6) Every pesticide imported by an agriculturist for use on his farm land is prescribed for the purpose of subsection 1 of section 6 of the Act.

(7) An agriculturist shall not use a pesticide mentioned in subsection 6 unless he has applied for a permit in Form 3 and is the holder of a permit for the land extermination. O. Reg. 618/74, s. 21.

22. No person shall use water from a lake, river or other surface water in performing exterminations unless the equipment used in the extermination is equipped with an effective device to prevent back-flow. O. Reg. 618/74, s. 22.

23. No person shall wash any equipment used to perform an extermination in any lake, river or other surface water or in such a manner that any pesticide may be directly or indirectly discharged or deposited in any lake, river or other surface water. O. Reg. 618/74, s. 23.

CONTAINERS

24. (1) No person, other than a wholesale vendor or a limited wholesale vendor, shall have in his possession a pesticide other than in the container in which it was originally offered for sale.

(2) Subsection 1 does not apply to a person,

(*a*) who is performing an extermination in accordance with the Act and this Regulation; or

(b) who places the pesticide into a secondary container of a type and composition that is customarily used or approved by the manufacturer of the pesticide for that pesticide and bears a label in English denoting the trade name or common name and concentration of each active ingredient in the pesticide product. O. Reg. 618/74, s. 24.

25.—(1) Subject to subsection 2, an empty container that has been used to hold a Schedule 1, 2 or 5 pesticide shall be disposed of by puncturing or breaking and burying the container in such a manner that it is covered by at least eighteen inches of soil and is not near any watercourse or water table.

(2) An empty container that has been used to hold a Schedule 1, 2 or 5 pesticide need not be disposed of if it has been decontaminated in a manner approved by the Director. O. Reg. 618/74, s. 25.

26. Where the original container of a Schedule 1, 2 or 5 pesticide is damaged or broken, the person responsible for the pesticide shall, under the direction of the person who has registered the pesticide under the *Pest Control Products Act* (Canada), and to the satisfaction of the Director,

(a) replace the container with a container equivalent to that originally used; or

(b) dispose of the container and its contents by burying them under eighteen inches of soil in such a manner that they are not near any watercourse or water table; and

(c) clean up any spillage and decontaminate any area, carrier or commodity that has come in contact with the pesticide. O. Reg. 618/74, s. 26.

NOTIFICATION OF FIRES AND ACCIDENTS

27. If a pesticide is involved in a fire or other occurrence that may result in the pesticide being released into the environment, the person responsible for a pesticide shall forthwith notify the Director. O. Reg. 618/74, s. 27.

STRUCTURAL EXTERMINATIONS

28.—(1) A structural exterminator's licence of the class prescribed in Column 1 of the following Table is authority to use a pesticide prescribed in Column 2 thereof under the conditions of use set out in Column 3 thereof:

TABLE

	Column 1	Column 2	Column 3
Item	Class of Structural Exterminator's Licence	Pesticide Authorized for Use	Conditions of Use
1	1	Schedules 1, 2, 3, 4 and 5	Any structural use except termite control
2	2	(a) Schedules 2, 3 and 4	Any structural use except termite control
		(b) Schedules 1 and 5	Assisting a Class 1 Structural Exterminator
3	3	(a) Schedules 3 and 4	Any structural use except termite control
		(b) Schedule 2	Assisting Class 2 Structural Exterminator
4	4	Schedules 3 and 4	Assisting Class 3 Structural Exterminator
		Pesticide(s) stipulated on licence	Assisting Class 5 or Class 6 Structural Exterminator
5	5	Pesticide(s) stipulated on licence	Control of termites and other wood-destroying insects
6	6	Pesticide(s) stipulated on licence	Use, premise and equipment stipulated on licence

(2) Every structural exterminator's licence shall have endorsed thereon the class of exterminator's licence for which it has been issued. O. Reg. 618/74, s. 28.

STRUCTURAL EXTERMINATOR'S LICENCE REQUIREMENTS

29.—(1) An applicant for a Class 1 structural exterminator's licence is required to,

(a) be licensed as a Class 2 structural exterminator at the time of his application, and have assisted a Class 1 structural exterminator for a minimum period of six months; or

(b) satisfy the Director that he has sufficient knowledge and experience to be licensed as a Class 1 structural exterminator.

(2) An applicant for a Class 2 structural exterminator's licence is required to,

(a) be licensed as a Class 3 structural exterminator at the time of his application, and to have assisted a Class 2 structural exterminator for a minimum period of six months; or

(b) satisfy the Director that he has sufficient knowledge and experience to be licensed as a Class 2 structural exterminator.

(3) An applicant for a Class 3 structural exterminator's licence is required to,

(a) have been licensed as a Class 4 structural exterminator at the time of his application, and to have assisted a Class 3 structural exterminator for a minimum period of one year; or

(b) satisfy the Director that he has sufficient knowledge and experience to be licensed as a Class 3 structural exterminator.

(4) An applicant for a Class 5 structural exterminator's licence is required to,

(a) have been licensed as a Class 4 structural exterminator at the time of his application, and to have assisted a Class 5 structural exterminator for a minimum period of six months; or

(b) satisfy the Director that he has sufficient knowledge and experience to be licensed as a Class 5 structural exterminator.

(5) An applicant for a Class 6 structural exterminator's licence is required to,

(a) have been licensed as a Class 4 structural exterminator at the time of his application and to have assisted a Class 6 structural exterminator for a minimum period of six months; or

(b) satisfy the Director that he has sufficient knowledge and experience to be licensed as a Class 6 structural exterminator. O. Reg. 618/74, s. 29.

GENERAL REQUIREMENTS FOR STRUCTURAL EXTERMINATION PERMITS

30.—(1) A structural extermination by means of a Schedule 1, 2, 3 or 5 pesticide is prescribed for the purpose of subsection 1 of section 6 of the Act.

(2) Subject to section 33, an application for a permit for a structural extermination by means of a pesticide mentioned in subsection 1 shall be in Form 10. O. Reg. 618/74, s. 30.

31.—(1) A holder of any class of structural exterminator's licence authorized to use a Schedule 2 or 3 pesticide is exempt from subsection 1 of section 6 of the Act for the structural extermination by means of that pesticide.

(2) Any person exempt from the licensing requirement of subsection 1 of section 4 of the Act for a structural extermination by means of a Schedule 2 or 3 pesticide is also exempt from subsection 1 of section 6 of the Act for that extermination. O. Reg. 618/74, s. 31.

STRUCTURAL EXTERMINATION USE AND PERMIT REQUIREMENTS FOR METHYL BROMIDE, PHOSTOXIN AND CYANIDE COMPOUNDS

32. Sections 33 to 43, both inclusive, apply to structural exterminations in which any Schedule 1 or 5 pesticide containing methyl bromide, cyanide compounds or phostoxin is used. O. Reg. 618/74, s. 32.

33.—(1) An application for a permit for a structural extermination by means of a pesticide mentioned in section 32 shall be in Form 4.

(2) Every applicant for a permit mentioned in subsection 1 shall,

(a) be licensed as a Class 1 structural exterminator; or

(b) be licensed as a Class 5 or 6 structural exterminator and authorized to use any pesticide containing methyl bromide, phostoxin or cyanide compounds. O. Reg. 618/74, s. 33.

34.—(1) At least twenty-four hours before but not more than seven days before performing an extermination with a pesticide mentioned in section 32, the exterminator shall deliver a notice in writing,

(*a*) to every occupant eighteen years of age and over in the building or vehicle or on the land where the extermination is to be performed;

(*b*) to at least one occupant eighteen years of age or over,

(i) of every building adjoining the building where the extermination is to be performed, and

(ii) of every building so located that the extermination constitutes an actual or potential hazard to its occupants; and

(*c*) to the nearest police and fire department having jurisdiction where the structural extermination is to be performed.

(2) Clause *a* of subsection 1 does not apply to a commercial or industrial building where notice has been given to the owner of the building or his representative.

(3) Every notice under subsection 1 shall set out,

(*a*) the address where the extermination is to be performed;

(*b*) that there is danger of poisonous gas;

(*c*) the date when it is proposed to perform the extermination;

(*d*) that occupants are to vacate and remain out of the buildings, vehicles or lands during the periods of extermination and airing-out; and

(*e*) such other information as the Director may require.

(4) The exterminator shall ensure that the buildings, vehicles or lands referred to in this section are unoccupied during the periods of extermination and airing-out.

(5) Within seven days after the extermination has been completed, the exterminator shall so notify the Director. O. Reg. 618/74, s. 34.

35. When the pesticide being used in an extermination is in the form of a gas and is not a warning gas, the exterminator shall release a warning gas with the release of the pesticide. O. Reg. 618/74, s. 35.

36. No person shall use a pesticide containing a cyanide compound for an extermination in any building or vehicle where the pesticide may come in contact with the waters of any stream, lake or water flowing into any stream or lake. O. Reg. 618/74, s. 36.

37. Before an extermination is performed by means of a pesticide mentioned in section 32 in a building or vehicle the exterminator shall,

(*a*) seal all openings into the area in which the extermination is to be performed, including drains, ducts, vents and cracks in a manner sufficient to make the area gas-tight; and

(*b*) remove from the area all water and food likely to absorb the gas being used. O. Reg. 618/74, s. 37.

38.—(1) Before performing an extermination by means of a pesticide mentioned in section 32, the exterminator shall post a placard at least fourteen inches long and ten inches wide,

(*a*) at all entrances to the building or vehicle and land on which the extermination is to be performed and bearing the word "danger" in red letters at least 2½ inches high on a white background and indicating that an extermination is being performed on the premises and setting out the name of the exterminator and his emergency telephone number; and

(*b*) at all entrances to buildings designated in clause *b* of subsection 1 of section 34 bearing the word "danger" in green letters at least 2½ inches high on a white background and indicating that an extermination is being performed in an adjoining building.

(2) The exterminator shall ensure that the placards posted under subsection 1 are illuminated from sundown to sunrise.

(3) The exterminator shall ensure that,

(*a*) no placard is removed; and

(*b*) the building or vehicle is not reoccupied until twenty-four hours have elapsed since the gas was last released in the extermination. O. Reg. 618/74, s. 38.

39.—(1) The exterminator shall ensure that no person enters or remains in a building or vehicle where an extermination is being or has been performed using a pesticide mentioned in section 32 until the airing-out is completed in accordance with section 41 except,

(*a*) the exterminator;

(*b*) a provincial officer designated under the Act;

(*c*) a full-time fire fighter as defined in *The Fire Departments Act*; or

(*d*) a member of any police force established under *The Police Act*.

(2) During the period mentioned in subsection 1 the exterminator shall,

(*a*) lock all doors and entrances to the building or vehicle; and

(*b*) post adult guards in a manner sufficient to prevent any person, other than those mentioned in subsection 1, from entering the building or vehicle. O. Reg. 618/74, s. 39.

40. The exterminator shall ensure that no person mentioned in subsection 1 of section 39 enters or remains in the building or vehicle after an extermination therein is commenced and before the airing-out is completed under section 41 unless,

(*a*) he wears,

(i) a gas mask fitted with a canister capable of absorbing all poisonous gases present, or

(ii) a self-contained apparatus providing an independent supply of air; and

(*b*) he is accompanied by at least one other adult person mentioned in subsection 1 of section 39. O. Reg. 618/74, s. 40.

41.—(1) Where an extermination by means of a pesticide mentioned in section 32 is completed, the exterminator shall,

(*a*) remove and bury under at least eighteen inches of soil, and not near any watercourse or water table, all substances used for the extermination or for sealing openings;

(*b*) circulate fresh air to every air space in the buildings or vehicles described in section 34; and

(*c*) make the test prescribed in subsection 2, 3 or 4, as the case may be.

(2) Where a pesticide containing methyl bromide is used in the extermination, the exterminator shall make tests by means of a halide-leak detector for the detection of the presence of methyl bromide gas at the floor level of each room, basement, closet, attic and any other enclosed space in the building or vehicle in which the extermination was performed.

(3) Where a pesticide containing a cyanide compound is used in the extermination, the exterminator shall make tests for the detection of the presence of hydrocyanic acid gas in the building or vehicle in which the extermination was performed by means of glass detector tubes used for determining concentrations of hydrocyanic acid gas,

(*a*) each wall in every room, closet or other enclosed space;

(*b*) each floor and wall in the basement; and

(*c*) each ceiling and wall of every attic room.

(4) Where a pesticide containing phostoxin is used in the extermination, the exterminator shall make tests for the detection of the presence of phosphine gas in the building or vehicle in which the extermination was performed by means of glass detector tubes used for determining the concentrations of phosphine gas.

(5) The airing-out of the building or vehicle shall be deemed not completed,

(*a*) where a pesticide containing methyl bromide has been used and the flame of the halide-leak detector changes to a greenish colour;

(*b*) where a pesticide containing a cyanide compound has been used and a reaction shows in detector tubes to ten or more PPM of hydrocyanic acid gas; or

(*c*) where a pesticide containing phostoxin has been used and a reaction shows in detector tubes to 0.3 PPM or more of phosphine gas.

(6) During the extermination and until the airing-out is completed in accordance with this section, no person shall move the vehicle, if any, without the permission of the Director. O. Reg. 618/74, s. 41.

METHYL BROMIDE, PHOSTOXIN AND CYANIDE COMPOUNDS PERMIT EXEMPTIONS

42.—(1) Subject to subsection 3, where an exterminator engages in an extermination by means of a pesticide mentioned in section 32, in an enclosed space or vault that,

(*a*) is gas tight; and

(*b*) where the vault is inside or opens into a building and is equipped in accordance with subsection 2,

and if the exterminator,

(*c*) has a gas mask on his person during the extermination;

(*d*) before a gas is released, searches the enclosed space or vault to ensure that it contains no person;

(*e*) locks the door by a padlock and keeps the keys in his possession;

(*f*) is present during the airing-out period, and

(*g*) performs the tests prescribed in subsections 2, 3 and 4 of section 41, as the case may be, to determine whether the airing-out period is completed,

he is exempt from subsection 1 of section 6 of the Act and from sections 34, 37, 39 and 40 of this Regulation for that extermination.

(2) The enclosed space or vault that is inside or opens into a building, mentioned in subsection 1, shall be equipped with,

(*a*) a sheet metal lining having soldered joints and covering the walls and ceilings or any other lining that is equivalent in the opinion of the Director;

(*b*) a concrete floor or wooden floor of which the joints are made gastight;

(*c*) a rubber gasket around the perimeter of all doors;

(*d*) an exhaust fan controlled by a switch from outside the enclosed space or vault capable of giving ten changes of air per hour and discharging exhaust gases into outside atmosphere at a point removed from any door, windows or openings; and

(*e*) provision to introduce gas from outside the enclosed space or vault.

(3) Before the initial use for an extermination of the enclosed space or vault mentioned in subsection 1, the exterminator shall notify the Director and shall not proceed with the extermination until the Director has approved the construction and equipment of the enclosed space or vault as required by this section. O. Reg. 618/74, s. 42.

43. Where an exterminator engages in an extermination by means of a pesticide containing methyl bromide and the gas is enclosed under a gas-tight covering and the extermination takes place,

(*a*) outside a building while,

(i) the exterminator and at least one other exterminator is present during the airing-out, and

(ii) all persons present during the introduction of the gas and airing-out period are wearing gas masks; or

(*b*) inside a building that is separate from any other building and,

(i) no person other than persons engaged in the extermination is present during the extermination and airing-out,

(ii) no part is used for human habitation,

(iii) the exterminator and at least one other exterminator is present during the introduction of gas and airing-out, and

(iv) all persons present during the introduction of the gas and airing-out period are wearing gas masks.

he is exempt from subsection 1 of section 6 of the Act and sections 34, 37, 39 and 40 of this Regulation for that extermination. O. Reg. 618/74, s. 43.

USE RESTRICTIONS OF THALLIUM SULPHATE, STRYCHNINE AND ZINC PHOSPHIDE

44. No pesticide containing thallium sulphate, strychnine or zinc phosphide shall be used for an extermination,

(*a*) in a room while it is being used for human habitation;

(*b*) in an area to which entry by any person cannot be barred; or

(*c*) in such a manner as to come in contact with or be likely to come in contact with food or drink intended for human or animal consumption. O. Reg. 618/74, s. 44.

45. Where a pesticide mentioned in section 44 is used in a structural extermination, the exterminator shall,

(*a*) keep, during the period of extermination, a record of the number and location of the baits used in the extermination; and

(*b*) remove every bait from the area when the extermination is completed. O. Reg. 618/74, s. 45.

USE RESTRICTIONS OF LINDANE

46.—(1) Where lindane in the form of a vapour is used in an extermination in a building while the building is occupied,

(*a*) the building shall not be sealed so as to impede the normal change of air; and

(*b*) the amount of vapour released in a twenty-four hour period shall not exceed the amount produced by one gram of lindane for each 15,000 cubic feet of space in the room in which the vapour is generated.

(2) No person shall release lindane in the form of a vapour in an extermination at a rate greater than that set out in clause *b* of subsection 1 unless,

(*a*) the area in which the extermination is performed is vacant from the time the vapour is released until the area has been aired out by free circulation of air for one hour; and

(*b*) all surfaces in the area likely to come into contact with food are washed.

(3) No person shall use a lindane vapourizer,

(*a*) where any food is prepared, stored or served; or

(*b*) in any rooms which are occupied by a person. O. Reg. 618/74, s. 46.

USE RESTRICTIONS OF SCHEDULE 1, 2 OR 5 PESTICIDES AS A SUSPENSION IN AIR

47. No exterminator shall use a Schedule 1, 2 or 5 pesticide as a suspension in air in a structural extermination unless he is accompanied by at least one other adult person. O. Reg. 618/74, s. 47.

48.—(1) Before a structural extermination is performed by means of a Schedule 1, 2 or 5 pesticide as a suspension in air the exterminator shall,

(*a*) lock from the outside all doors, except one leading into the building in which the extermination is to be performed;

(*b*) post on the outside of all doors leading into the building a placard,

(i) that is at least fourteen inches long and ten inches wide, and

(ii) that bears the words "danger poisonous substances being used inside" in red block letters at least 2½ inches in height on a white background; and

(*c*) ensure that the building is vacant.

(2) After a Schedule 1, 2 or 5 pesticide as a suspension in air is released in a building, the exterminator shall lock the door except in clause *a* of subsection 1. O. Reg. 618/74, s. 48.

49. An exterminator who performs an extermination in a building by means of a Schedule 1, 2 or 5 pesticide as a suspension in air shall not permit any person to enter the building until the building is free of the pesticide as a suspension in air. O. Reg. 618/74, s. 49.

50. When a structural extermination by means of a Schedule 1, 2 or 5 pesticide as a suspension in air is completed, the exterminator shall forthwith bury all material being discarded under at least eighteen inches of soil in such a manner as not to be near any surface water or water table. O. Reg. 618/74, s. 50.

USE RESTRICTIONS OF SPOT FUMIGANTS

51. Where a structural extermination is performed by means of a pesticide containing ethylene dichloride, ethylene dibromide or carbon tetrachloride, every person performing the extermination shall,

(*a*) wear a gas mask with a suitable canister; and

(*b*) be accompanied by at least one other person. O. Reg. 618/74, s. 51.

52. Where a person performs an extermination in a building or enclosure by means of a pesticide containing chloropicrin, he shall ensure that,

(*a*) no person is in the building or any adjoining building;

(*b*) a gas mask and suitable canister is on his person at all times; and

(*c*) the building or enclosure is free from chloropicrin before any other person is allowed to enter. O. Reg. 618/74, s. 52.

STRUCTURAL EXTERMINATION LICENCE EXEMPTIONS

53. Where a person,

(*a*) is a householder and performs an extermination in the house which he occupies; or

(*b*) is a tenant of an apartment or flat which he has rented and performs an extermination in the apartment or flat occupied by him,

by means of a Schedule 3 pesticide, the householder or tenant, as the case may be, is exempt from subsection 1 of section 4 of the Act for that extermination. O. Reg. 618/74, s. 53.

54.—(1) Where a person performs an extermination by means of a Schedule 4 pesticide on premises owned or occupied by him or his full-time employer he is exempt from subsection 1 of section 4 of the Act for that extermination.

(2) For the purpose of subsection 1, an apartment in an apartment building under lease to a person is not the premises of the lessor but shall be deemed to be the premises of the lessee. O. Reg. 618/74, s. 54.

55.—(1) Where a person performs an extermination on animals within a farm structure by means of a Schedule 3 or 4 pesticide and is licensed as a Class 5 or 10 land exterminator authorized to use the pesticide being used in the extermination, he is exempt from being licensed as a structural exterminator for such extermination.

(2) An agriculturist or his full-time employees who performs an extermination on animals within a farm structure occupied by him, by means of a Schedule 3 or 4 pesticide, is exempt from being licensed as a structural exterminator for that extermination. O. Reg. 618/74, s. 55.

56. Where a person is licensed as a Class 10 land exterminator and performs an extermination in a farm structure with a pesticide mentioned in section 32, he is exempt from being licensed as a structural exterminator for that extermination. O. Reg. 618/74, s. 56.

57. Where an exterminator engages in an extermination in or upon an installation or machinery that is a fixture in a building using a pesticide containing a combination of methyl bromide with a chemical mentioned in section 51, provided that the methyl bromide does not exceed thirty per cent by weight of the pesticide, and the exterminator,

(*a*) performs the extermination in a building,

(i) that is not attached to any other building, and

(ii) in which no part is used for human habitation;

(*b*) wears a gas mask; and

(*c*) excludes all persons not engaged in the extermination from the building during the extermination,

he is exempt from the permit requirement of subsection 1 of section 6 of the Act and sections 34, 37, 39 and 40 of this Regulation for that extermination. O. Reg. 618/74, s. 57.

58. Where a person is the holder of a permit for a structural extermination by means of a Schedule 2 or 3 pesticide, he is exempt from subsection 1 of section 4 of the Act for that extermination. O. Reg. 618/74, s. 58.

LAND EXTERMINATIONS

59.—(1) A land exterminator's licence of the class prescribed in Column 1 of the following Table is authority to use the pesticide prescribed in Column 2 thereof under the conditions of use set out in Column 3 thereof.

TABLE

	Column 1	Column 2	Column 3
Item	Class of Land Exterminator's Licence	Pesticide Authorized for Use	Conditions of Use
1	1	Schedule 2, 3 and 4 pesticides that are herbicides	Non-agricultural use
2	2	Schedule 3 and 4 pesticides that are herbicides	Non-agricultural use
3	3	Schedule 2, 3 and 4 pesticides other than herbicides	Non-agricultural use
4	4	Schedule 3 and 4 pesticides other than herbicides	Non-agricultural use
5	5	Schedule 2, 3, 4 and 5 pesticides other than herbicides	Agricultural land
6	6	Schedule 2, 3 and 4 pesticides that are herbicides	Agricultural land
7	7	Schedule 2, 3, 4 and 5 pesticides other than herbicides	From an airborne machine
8	8	Schedule 2, 3 and 4 pesticides that are herbicides	From an airborne machine
9	9	Schedule 2, 3, 4 and 5 pesticides other than herbicides	Concentrated air-blast machine and power dusters
10	10	Pesticide(s) stipulated on licence	use, premises and/or equipment stipulated on licence

(2) Every land exterminator's licence shall have endorsed thereon the class of land exterminator's licence for which it has been issued. O. Reg. 618/74, s. 59.

GENERAL PERMIT REQUIREMENTS FOR LAND EXTERMINATION

60.—(1) A land extermination by means of a Schedule 1, 2, 3 or 5 pesticide is prescribed for the purpose of subsection 1 of section 6 of the Act.

(2) Subject to subsection 2 of section 66, an application for a permit for a land extermination by means of a pesticide mentioned in subsection 1 shall be in Form 10. O. Reg. 618/74, s. 60.

61.—(1) Subject to subsection 3 and section 66, a holder of any class of land exterminator's licence authorized to use a Schedule 1, 2, 3 or 5 pesticide is exempt from subsection 1 of section 6 of the Act for that extermination.

(2) Subject to subsection 3 and section 66, any person exempt from subsection 1 of section 4 of the Act for a land extermination by use of a Schedule 1, 2, 3 or 5 pesticide is also exempt from subsection 1 of section 6 of the Act for that extermination.

(3) No person shall perform a land extermination by means of a pesticide containing picloram unless he is a holder of a permit for the land extermination issued by the Director. O. Reg. 618/74, s. 61.

LAND EXTERMINATOR'S USE REQUIREMENTS FOR METHYL BROMIDE AND CYANIDE COMPOUNDS

62. Sections 63, 64 and 65 apply to land exterminations by means of any Schedule 1 pesticide containing methyl bromide or cyanide compounds. O. Reg. 618/74, s. 62.

63. Before commencing exterminations with a pesticide mentioned in section 62 in a farm structure, which is deemed to be a land extermination for the purpose of this section, the exterminator shall deliver a notice to the nearest police and fire department having jurisdiction where the land extermination is to be performed setting out,

(*a*) the address where the extermination is to be performed;

(*b*) the pesticide to be used; and

(*c*) the time periods during which the exterminations are to be performed. O. Reg. 618/74, s. 63.

64. Before beginning an extermination using a pesticide mentioned in section 62, the exterminator shall post a placard at the immediate site in or on which the extermination is to be performed bearing the word "danger" in red letters at least 2½ inches high on a white background, indicating that an extermination is being performed on the premises. O. Reg. 618/74, s. 64.

65. (1) The exterminator shall ensure that after an extermination using a pesticide mentioned in section 62 is commenced, all doors and entrances to farm structures in which the extermination is being performed are locked.

(2) The exterminator shall ensure that no person shall enter the farm structure after the extermination therein is commenced and before the airing-out is completed so that a safety hazard no longer exists, unless,

(*a*) he wears,

(i) a gas mask fitted with a canister capable of absorbing all poisonous gases present, or

(ii) a self-contained apparatus providing an independent supply of air; and

(*b*) he is accompanied by at least one other adult person similarly equipped. O. Reg. 618/74, s. 65.

LAND EXTERMINATION USE AND PERMIT REQUIREMENTS FOR AIRBORNE MACHINES

66.—(1) A holder of any class of land exterminator's licence authorized to use a Schedule 1 or 5 pesticide or a Schedule 2 or 3 pesticide containing a hormone-type herbicide from an airborne machine, requires a permit under subsection 1 of section 6 of the Act to perform the extermination authorized by his licence.

(2) An application for the permit mentioned in subsection 1 shall be in Form 5. O. Reg. 618/74, s. 66.

67. Where an extermination is performed from an airborne machine, the pilot of the airborne machine shall be the holder of a Class 7 or 8 land exterminator's licence. O. Reg. 618/74, s. 67.

68. Where a land extermination with an airborne machine is performed using a Schedule 1, 2 or 5 pesticide,

(*a*) the pesticide shall not be in a dust formulation; and

(*b*) the pilot of the machine shall not assist in the loading of the machine with the pesticide or otherwise expose himself to contact with it. O. Reg. 618/74, s. 68.

69.—(1) Every person who operates an airborne machine in performing land exterminations shall,

(*a*) keep a record in Form 6 of each land extermination performed by him for a period of one year after the extermination is completed or for such longer period as may be required by the Director in writing; and

(*b*) if the land extermination was performed for an operator, provide a copy of the record mentioned in clause *a* to the operator after the extermination is completed, and the operator shall keep a copy of the record for one year or for such longer period as may be required by the Director in writing.

(2) A pilot or operator, as the case may be, shall produce the records mentioned in subsection 1 to a provincial officer when requested by him and, unless provided with a copy of the records, the provincial officer may remove the records, or any portion thereof, in order to make copies. O. Reg. 618/74, s. 69.

LAND EXTERMINATION EXEMPTIONS

70. Where a person performs a land extermination for domestic purposes on land occupied by him by means of a Schedule 3 pesticide, he is exempt from subsection 1 of section 4 of the Act for that extermination. O. Reg. 618/74, s. 70.

71. Where a person performs a land extermination by means of a Schedule 4 pesticide on premises owned or occupied by him or his full-time employer, he is exempt from subsection 1 of section 4 of the Act for that extermination. O. Reg. 618/74, s. 71.

72. Where an agriculturist performs a land extermination on the farm land in which he is engaged in agricultural or forestry production by means of a Schedule 2, 3, 4 or 5 pesticide, he is exempt from subsection 1 of section 4 of the Act and section 66 for that extermination. O. Reg. 618/74, s. 72.

73. Where an agriculturist performs a land extermination on farm land for no consideration by means of a Schedule 2, 3, 4 or 5 pesticide, and he is not carrying on an extermination business, he is exempt from subsection 1 of section 4 of the Act for that extermination. O. Reg. 618/74, s. 73.

74. Where an inspector under *The Bees Act* is engaged in destroying bees by extermination under the authority of that Act by means of a Schedule 1 pesticide containing methyl bromide or a cyanide compound and,

(*a*) wears a gas mask capable of absorbing any poisonous gas present;

(*b*) performs the extermination in open air;

(*c*) prevents all persons from coming into contact with the poisonous gases; and

(*d*) remains at the site of the extermination during the time that any poisonous gases are present,

he is exempt from subsection 1 of section 4 of the Act and from sections 63, 64 and 65 of this Regulation for that extermination. O. Reg. 618/74, s. 74.

75. Where a person uses a Schedule 1 pesticide containing a cyanide compound on his own property or the property of his employer for,

(*a*) killing diseased colonies of bees;

(*b*) killing a fur-bearing animal held under a licence issued pursuant to *The Fur Farms Act*, or

(*c*) killing unwanted chicks,

he is exempt from subsection 1 of section 4 of the Act and sections 63, 64 and 65 of this Regulation for that extermination. O. Reg. 618/74, s. 75.

76.—(1) Where an area weed inspector under *The Weed Control Act*, in accordance with his duties under that Act, performs a land extermination by means of a Schedule 2, 3 or 4 pesticide that is a herbicide and uses a compressed-air hand sprayer or equipment no longer than that commonly called a knapsack sprayer, he is exempt from subsection 1 of section 4 of the Act for that extermination.

(2) A municipality which performs a land extermination for another municipality by means of a Schedule 2, 3 or 4 pesticide is exempt from subsection 2 of section 4 of the Act for that extermination. O. Reg. 618/74, s. 76.

77.—(1) Where an exterminator is licensed as a Class 1, 2, 3 or 6 structural exterminator and performs an extermination on animals on farm land, he is ecempt from being licensed as a land exterminator for that extermination.

(2) Where an exterminator is licensed as a Class 1, 2, 3 or 6 structural exterminator and performs a land extermination for mammalian, avian or insects pests,

(*a*) on or near a waste disposal site defined under *The Environmental Protection Act, 1971*; or

(*b*) near the building or vehicle where he is performing the structural extermination for the mammalian, avian or an insect pest.

he is exempt from being licensed as a land exterminator for that extermination. O. Reg. 618/74, s. 77.

78. No operator shall permit a vehicle to be used in transporting or applying a pesticide to be used in connection with a land extermination performed by a person licensed to perform land exterminations as a Class 1, 2, 3, 4, 5, 6, 9 or 10 land exterminator unless a metal licence plate is obtained from the Ministry and is affixed to the rear of the vehicle in such a manner that the plate is visible and legible at all times. O. Reg. 618/74, s. 78.

79.—(1) Unless exempt from subsection 1 of section 4 of the Act, no person shall perform a land extermination for which pesticide application equipment is used unless the equipment is under supervision of an exterminator licensed to perform that extermination.

(2) An exterminator shall not supervise an extermination or exterminations for which a total of more than four pieces of pesticide application equipment are being used at any time.

(3) Whenever an extermination mentioned in subsection 1 is being performed and the exterminator is not present, he shall ensure that a person at least sixteen years of age carrying a certificate signed by the exterminator certifying that the person is competent to perform the extermination is present and in charge of each piece of pesticide application equipment. O. Reg. 618/74, s. 79.

WATER EXTERMINATIONS

80. (1) A water exterminator's licence of the class prescribed in Column 1 of the following Table is authority to use a pesticide in Column 2 thereof under the conditions of use set out in Column 3 thereof:

TABLE

	Column 1	Column 2	Column 3
Item	Class of Water Exterminator's Licence	Pesticide Authorized for Use	Conditions of Use
1	1	Schedule 2, 3 and 4 Pesticides that are herbicides	Water application
2	2	Schedule 2, 3 and 4 Pesticides other than herbicides	Water application
3	3	Pesticide(s) stipulated on licence	Use equipment and/or area to be treated stipulated on licence

(2) Every water exterminator's licence shall have endorsed thereon the class of water exterminator's licence for which it has been issued. O. Reg. 618/74, s. 80.

WATER EXTERMINATION PERMIT REQUIREMENTS

81. An application for a permit to perform a water extermination shall be in Form 7. O. Reg. 618/74, s. 81.

WATER EXTERMINATION USE AND PERMIT REQUIREMENTS FOR AIRBORNE MACHINES

82. (1) No person shall perform a water extermination from an airborne machine unless the pilot of the airborne machine,

(*a*) is the holder of a Class 7 or 8 land exterminator's licence;

(*b*) does not assist in the loading of the machine with the pesticide or otherwise expose himself to contact with it; and

(*c*) ensures that the pesticide intended for use is not in a dust formulation.

(2) Every pilot of the airborne machine shall,

(*a*) keep a record in Form 6 of each water extermination performed by him for a period of one year or such longer period as may be required by the Director in writing; and

(*b*) if the water extermination was performed for an operator provide a copy of the record mentioned in clause *a* to the operator after the extermination is completed and the operator shall keep a copy of the record for one year or such longer period as may be required by the Director in writing.

(3) A pilot or operator, as the case may be, shall produce the records mentioned in subsection 2 to a provincial officer when requested by him, and, unless provided with a copy of the records, the provincial officer may remove the records, or any portion thereof, in order to make copies. O. Reg. 618/74, s. 82.

WATER EXTERMINATION LICENCE AND PERMIT EXEMPTIONS

83. Where a person performs a water extermination in or on water that,

(*a*) is located wholly within the boundaries of premises owned or occupied by the person or his full-time employer; and

(*b*) does not discharge water by any means directly or indirectly, other than by percolation, into a well, lake river, pond, spring, stream, reservoir or other water or watercourse that is located wholly or partly outside the boundary of the land,

he is exempt from subsection 1 of section 4 of section 4 and subsection 2 of section 6 of the Act for that extermination. O. Reg. 618/74, s. 83.

84. Where a person performs a water extermination for the control of plants that emerge from or float on the surface of the water in a drainage ditch, which at the time of the extermination contains no moving water, and the person uses,

(*a*) any pesticide that is registered under the *Pest Control Products Act* (Canada) that is labelled for that use; or

(*b*) any pesticide that is registered under the *Pest Control Products Act* (Canada) containing 2,4-D or 2,4,5-T, or both, and the person adds the substance at a rate not exceeding the equivalent of three pounds per acre of 2,4,5-T or 2,4-D or of any combination of these,

he is exempt from subsection 2 of section 6 of the Act for that extermination. O. Reg. 618/74, s. 84.

VENDOR LICENCES AND REQUIREMENTS

85. The following classes of vendor's licences are prescribed:

1. Wholesale vendor's licence.
2. Limited wholesale vendor's licence.
3. Class 1 retail vendor's licence.
4. Class 2 retail vendor's licence.
5. Class 3 retail vendor's licence. O. Reg. 618/74, s. 85.

86. (1) Subject to subsection 2, an applicant for any class of vendor's licence or renewal thereof, shall,

(*a*) submit with his application the fee prescribed by section 7 for the class of vendor's licence he is applying for; and

(*b*) unless the applicant is a corporation or a partnership, be at least eighteen years of age.

(2) Where the applicant is a corporation or partnership it shall designate on its application the partner, director or officer who is the Official Representative of the corporation or partnership, as the case may be, who shall be at least eighteen years of age and shall sign the application and whose duty it is to ensure compliance with the Act and the regulations thereunder.

(3) An applicant for a wholesale vendor's licence or limited wholesale vendor's licence shall submit with his application the name and address of,

(*a*) each premise to be covered by the licence; and

(*b*) a person responsible for each premise to be covered by the licence whose duty it is to ensure compliance with this Act and the regulations thereunder.

(4) The holder of any class of vendor's licence shall notify the Director in writing of any change in the information submitted under this section within fourteen days of the effective date of the change. O. Reg. 618/74, s. 86.

WHOLESALE AND LIMITED WHOLESALE VENDOR'S LICENCE REQUIREMENTS

87. A holder of a wholesale vendor's licence or limited wholesale vendor's licence who sells at wholesale from more than one premises does not require a licence for each premise if he has met the requirements of subsections 3 and 4 of section 86. O. Reg. 618/74, s. 87.

88. A holder of a wholesale vendor's licence may sell at wholesale,

(*a*) a Schedule 1 or 5 pesticide only to a holder of,

(i) a wholesale vendor's licence,

(ii) a limited wholesale vendor's licence, or

(iii) a Class 1 retail vendor's licence,

(*b*) a Schedule 2 pesticide only to a holder of,

(i) a wholesale vendor's licence,

(ii) a limited wholesale vendor's licence,

(iii) a Class 1 retail vendor's licence, or

(iv) a Class 2 retail vendor's licence;

(*c*) a Schedule 3 pesticide only to a holder of,

(i) a wholesale vendor's licence,

(ii) a limited wholesale vendor's licence,

(iii) a Class 1 retail vendor's licence,

(iv) a Class 2 retail vendor's licence, or

(v) a Class 3 retail vendor's licence. O. Reg. 618/74, s. 88.

89. A holder of a limited wholesale vendor's licence may sell at wholesale only,

(*a*) Schedule 4 pesticides;

(*b*) Schedule 3 pesticides that are paints, stains, sealers or wood preservatives provided that no food is prepared, sold or stored on the same premises;

(*c*) Schedule 3 pesticides that are disinfectants, cleaners or bacteriacides;

(*d*) Schedule 2 or 3 pesticides for drill box treatments of corn seed if the pesticide is sold with the corn seed to be treated and the pesticide is in a dust formulation with no greater than twenty-five per cent concentration of lindane and the package contents do not exceed two ounces in weight; and

(*e*) Schedule 2 pesticides that are intended for use as bacteriacides in cutting oil, marine or aviation fuels. O. Reg. 618/74, s. 89.

RETAIL VENDOR'S LICENCE REQUIREMENTS

90. Every retail vendor's licence shall be displayed in a prominent place at the premises in respect of which the licence was issued. O. Reg. 618/74, s. 90.

91. Notwithstanding sections 92, 93 and 94, a holder of any class of retail vendor's licence may sell a pesticide which he is authorized to sell at retail to the holder of a permit issued by the Director for an extermination, the pesticide mentioned in the permit in accordance with any terms and conditions contained therein. O. Reg. 618/74, s. 91.

92. The holder of a Class 1 retail vendor's licence may sell at retail,

(*a*) a Schedule 1 pesticide only to a licensed exterminator authorized to use such pesticide;

(*b*) a Schedule 2 or 5 pesticide only to,

(i) a licensed exterminator authorized to use such pesticide,

(ii) an agriculturist, except a pesticide containing picloram, and

(iii) an area weed inspector designated under *The Weed Control Act*; and

(*c*) a Schedule 3 pesticide only to,

(i) a licensed exterminator authorized to use that pesticide, and

(ii) a person exempt from subsection 1 of section 4 of the Act for an extermination by means of that pesticide. O. Reg. 618/74, s. 92.

93. A holder of a Class 2 retail vendor's licence may sell at retail,

(*a*) a Schedule 2 pesticide only to,

(i) a licensed exterminator authorized to use that pesticide,

(ii) an agriculturist, except a pesticide containing picloram, and

(iii) an area weed inspector designated under *The Weed Control Act*; and

(*b*) a Schedule 3 pesticide only to,

(i) a licensed exterminator authorized to use that pesticide, and

(ii) a person exempt from subsection 1 of section 4 of the Act for an extermination by means of that pesticide. O. Reg. 618/74, s. 93.

94. A holder of a Class 3 retail vendor's licence may sell at retail a Schedule 3 pesticide only to,

(*a*) a licensed exterminator authorized to use a pesticide; and

(*b*) a person exempt from subsection 1 of section 4 of the Act for an extermination by means of that pesticide. O. Reg. 618/74, s. 94.

95. A person is exempt from requiring a retail vendor's licence to sell at retail,

(*a*) a Schedule 4 pesticide;

(*b*) a Schedule 3 pesticide that is a paint, stain, sealer or wood preservative provided that no food is prepared, sold or stored on the same premises;

(*c*) a Schedule 3 pesticide that is a disinfectant, cleanser or bacteriacide;

(*d*) a Schedule 2 and 3 pesticide for drill box treatments of corn seed if the pesticide is sold with the corn seed to be treated and the Schedule 3 pesticide is in a dust formulation with no greater than twenty-five per cent concentration of lindane and the package contents do not exceed two ounces in weight; and

(*e*) a Schedule 2 pesticide that is intended for use as a bacteriacide in cutting oil, marine or aviation fuels. O. Reg. 618/74, s. 95.

96.—(1) Subject to subsection 2, the following classes of persons are exempt from requiring a retail vendor's licence where their dealings in pesticides are confined to operations involving the application of pesticides in the course of their business:

(*a*) a licensed exterminator; and

(*b*) an area weed inspector designated under *The Weed Control Act* who, in accordance with his duties, sells or transfers a Schedule 2 or 3 pesticide, which is a herbicide, to any person who is authorized under the Act and this Regulation to use such a pesticide.

(2) Every person exempted under subsection 1 is subject to clause *a* of subsection 1 and subsections 2, 3 and 4 of section 97. O. Reg. 618/74, s. 96.

RECORDS

97.—(1) Every holder of a vendor's licence shall keep a record of each sale or transfer of a Schedule 1, 2 and 5 pesticide setting out,

(*a*) the name and address of the purchaser or transferee;

(*b*) the type and class of licence or permit to use, if any, held by the purchaser or transferee and the licence or permit number;

(*c*) a description of the pesticide sold or transferred, including the name, class, unit size and quantity of the pesticide.

(2) A record made under subsection 1 shall be kept by the holder of the vendor's licence for a period of three years or such longer period as the Director may require by written notice.

(3) Every vendor who receives a written request from the Director for any record kept under subsection 1 shall forward the record or a copy thereof to the Director within thirty days of receving the request.

(4) The vendor shall produce any record kept under subsection 1 to a provincial officer when requested by him and the provincial officer may remove such record, or any portion thereof, in order to make copies. O. Reg. 618/74, s. 97.

GENERAL STORAGE

98. No person shall store any pesticide in such a manner that the pesticide is likely to come into contact with food or drink intended for human or animal consumption. O. Reg. 618/74, s. 98.

99. Every person responsible for a Schedule 1, 2 or 5 pesticide shall ensure that,

(*a*) any room in which the pesticide is stored is ventilated to the outside atmosphere;

(*b*) a placard is affixed and maintained on the outside of each door leading into the room in which the pesticide is stored bearing the words "Chemical Storage Warning—Authorized Persons Only" in block letters clearly visible; and

(*c*) no person can enter the room in which the pesticide is stored without the express permission of the person responsible. O. Reg. 618/74, s. 99.

VENDOR STORAGE

100.—(1) Subject to subsections 2 and 3, every holder of a wholesale vendor's licence or limited wholesale vendor's licence who stores any Schedule 1, 2, 3, 4 or 5 pesticide shall store the pesticide,

(*a*) in such manner that the pesticide is not likely to contaminate food or drink intended for human or animal consumption;

(*b*) in such a manner that the pesticide is not likely to impair the health or safety of any person;

(*c*) in an area that is maintained in a clean and orderly manner and with precautions taken sufficient to prevent the pesticide from contaminating any other pesticide stored in the same area, or the natural environment; and

(*d*) in an area that has a warning sign prominently displayed at the entrances thereof indicating the presence of a pesticide.

(2) Subject to subsection 3, and in addition to the requirements mentioned in subsection 1, every holder of a wholesale vendor's licence or limited wholesale vendor's licence who stores any Schedule 1, 2 or 5 pesticide shall store the pesticide in an area,

(*a*) that has no floor drain that leads into or drains directly or indirectly into a storm sewer, sanitary sewer or watercourse; and

(*b*) near which the following articles are kept by the licensee for emergency purposes and are readily available for such purposes,

(i) a respiratory protection device of a type that will give protection from the pesticide,

(ii) rubber boots,

(iii) rubber gloves, and

(iv) a hat and coat that will provide protection against any pesticide stored on the premises.

(3) In addition to the requirements mentioned in subsections 1 and 2, every holder of a wholesale vendor's licence or limited wholesale vendor's licence who stores any Schedule 1 or 5 pesticide shall store the pesticide in a room or compartment that,

(*a*) is well ventilated to the outside atmosphere and used exclusively for the storage of pesticides; and

(*b*) has a fire resistance rating of not less than one hour except for all doors and doorframes which may have a fire resistance rating of not less than forty-five minutes. O. Reg. 618/74, s. 100.

101. No vendor shall store any pesticide unless he is the holder of a vendor's licence authorizing him to sell the pesticide or is exempt from requiring a vendor's licence to sell the pesticide being stored. O. Reg. 618/74, s. 101.

102.—(1) Subject to subsections 2 and 3, every holder of any class of retail vendor's licence who stores a Schedule 1, 2, 3 or 5 pesticide shall store the pesticide,

(*a*) in such a manner that the pesticide will not likely contaminate food or drink intended for human or animal consumption;

(*b*) in such a manner that the pesticide will not be likely to impair the health or safety of any person;

(*c*) in an area that has a warning sign prominently displayed at the entrances thereof indicating the presence of a pesticide and stating that the pesticides may be handled only by the licensee or his employees;

(*d*) in an area near which there is prominently displayed a list of emergency telephone numbers, including those of the local fire department, hospital and poison control centre; and

(*e*) in an area that is maintained in a clean and orderly manner.

(2) Subject to subsection 3, and in addition to the requirements mentioned in subsection 1, a holder of any class of retail vendor's licence who stores any Schedule 1, 2 or 5 pesticide shall store the pesticide in an area,

(*a*) that is well ventilated;

(*b*) that is not accessible to the public and which is locked when the licensee, or an employee of the licensee, is not present on the premises on which the pesticide is stored;

(*c*) in an area near which the following articles are kept by the licensee for emergency purposes and are readily available for such purposes,

(i) a respiratory protection device of a type that will give protection from the pesticide,

(ii) rubber boots,

(iii) rubber gloves, and

(iv) a hat and coat that will provide protection against any pesticide stored on the premises; and

(*d*) that has no floor drain that leads into or drains directly or indirectly into a storm sewer, sanitary sewer or watercourse.

(3) In addition to the requirements mentioned in subsections 1 and 2, every holder of any class of retail vendor's licence who stores any Schedule 1 of 5 pesticide shall store the pesticide in an area that is used exclusively for the storage of pesticides. O. Reg. 618/74, s. 102.

VENDOR, FIRE DEPARTMENT NOTIFICATION

103. Every holder of,

(*a*) a wholesale or limited wholesale vendor's licence who stores for sale any pesticide; or

(*b*) a Class 1 or 2 retail vendor's licence who stores for sale any Schedule 1, 2 or 5 pesticide,

shall notify the local fire department having jurisdiction in the area in which such pesticides are stored of the presence of the pesticide on the premises in Form 11. O. Reg. 618/74, s. 103.

DISPLAY

104. Every holder of any class of retail vendor's licence who sells at retail any Schedule 1, 2, 3 or 5 pesticide shall,

(*a*) display a Schedule 1, 2 or 5 pesticide in such a manner that no person other than the licensee or his employees has ready access to the pesticide;

(*b*) display a Schedule 3 pesticide in such manner that such pesticide present minimal hazard to children; and

(*c*) not display any Schedule 1, 2, 3 or 5 pesticide on a shelf or in a display case that is adjacent to a shelf or display case containing food or drink intended for human or animal consumption or any other commodity which if contaminated by the pesticide may cause injury or damage to property or to plant or animal life or to any person. O. Reg. 618/74, s. 104.

TRANSPORTATION

105. No person shall transport or cause or permit the transportation of a pesticide by a vehicle operated on any highway or road unless the pesticide is secured in a manner sufficient to prevent the escape or discharge of the pesticide from the vehicle. O. Reg. 618/74, s. 105.

106. No person shall transport or cause or permit the transportation of any Schedule 1, 2, 3 or 5 pesticide together with commodities that are,

(*a*) food or drink intended for human or animal consumption;

(*b*) household furnishings; or

(*c*) toiletries, clothes, bedding or similar commodities,

by a vehicle operated on any highway or road unless the pesticide being transported is separated from such commodities in a manner sufficient to prevent their contamination or likely contamination by the pesticide. O. Reg. 618/74, s. 106.

107. No person shall transport or cause or permit the transportation of any pesticide in bulk by a vehicle operated on any highway or any road unless the vehicle has a warning sign prominently displayed on and affixed to the outside of the vehicle warning of the presence of the pesticide. O. Reg. 618/74, s. 107.

GENERAL EXEMPTIONS

108. A person who uses, stores, displays, sells or transports a pesticide which is a machine, apparatus, equipment, article, instrument, contrivance or gadget which does not utilize any,

(*a*) Schedule 1, 2, 3, 4 or 5 pesticide; or

(*b*) chemical or microbiological agent,

is exempt from the Act and Regulations thereunder. O. Reg. 618/74, s. 108.

109. A person who is,

(*a*) a legally qualified medical practitioner registered under *The Medical Act*; or

(*b*) registered under *The Veterinarians Act* and is practising veterinary science,

and uses, stores or transports a pesticide for the treatment, control, mitigation or prevention of pests in or on man or animal is exempt from the requirements of the Act and the regulations thereunder for such use, storage or transportation. O. Reg. 618/74, s. 109.

REGULATIONS REVOKED

110. Regulation 657 of Revised Regulations of Ontario, 1970 and Ontario Regulations 2/71, 398/71, 282/72, 550/72, 552/72, 553/72, 564/72, 119/73, 120/73 and 644/73 are revoked. O. Reg. 618/74, s. 110.

EXPLANATION OF CODES

111. The codes used in the Schedules have the following meanings

(*a*) "agent" is the Canadian agent for the registrant of the pesticide under the *Pest Control Products Act* (Canada) as set out in Table 1;

(*b*) "Registration No." is the registration number assigned to the pesticide under the *Pest Control Products Act* (Canada) or the *Fertilizer Act* (Canada); and

(*c*) "Registrant" is the person registering the pesticide under the *Pest Control Products Act* (Canada) or the *Fertilizer Act* (Canada) as set out in Table 2. O. Reg. 618/74, s. 111.

TABLE 1

INDEX OF CANADIAN AGENT CODES

Item	Code	Name and Address
1.	ABC	Agricultural and Veterinary Products Div., Abbott Labs. Ltd., P.O. Box 6150, Montreal, Que.
2.	AMI	Amchem Products Inc., 2224 Walker Rd., Windsor, Ont.
3.	AMZ	Amway of Canada Ltd., Highway No. 135, R.R. 4, London, Ont.
4.	BAI	Baird and McGuire (Canada) Ltd., 445-21st Ave., Lachine, Que.
5.	BAU	Charles Bateman, 135 Highway 7 East, Thornhill, Ont.
6.	BEL	Belco Safety Products Ltd., 341 Bering Ave., Toronto 18, Ont.
7.	BGM	B and G Marketing Services of Canada, P.O. Box 82, Orillia, Ont.
8.	BRE	G. Murray Bray, 127 Frederick St., Kitchener, Ont.
9.	BRM	Brooks Macfarlane, Box 67, Welland, Ont.
10.	BRP	Stanley Brock Ltd., 145 Market Ave. E., Winnipeg 2, Man.
11.	BYS	Brett-Young Seeds Ltd., Winnipeg 19, Man.
12.	CBS	Canadian Spawn and Supply Ltd., Box 385, Newkirk Rd., Richmond Hill, Ont.
13.	CBU	Mr. A. Carpenter, 171 Eglinton Ave. East, Toronto 12, Ont.
14.	CGC	Ciba-Geigy Canada Ltd., 1 Westside Dr., Etobicoke 653, Ont.
15.	CGL	Cargill Grain Co. Ltd., 1414 Richardson Bldg., 1 Lombard Place, Winnipeg 2, Man.
16.	CHH	Chemagro Ltd., 77 City Centre Dr., Mississauga, Ont.
17.	CHP	Chipman Chemicals Ltd., 519 Parkdale Ave. N., Hamilton, Ont.
18.	COF	Coghlan's Ltd., 235 Garry St., Winnipeg 1, Man.
19.	COI	Connecticut Chemicals Ltd., 24 Curity Ave., Toronto 16, Ont.
20.	COQ	Cooper Div. of Agropharm Ltd., 40 Riverview, LaSalle, Que.
21.	COU	F. D. Corry, Ste. 105A, 471 Winnipeg St., Pentiction, B.C.
22.	CUS	Cutter Laboratories International, 6023 Fifth St. S.E., Calgary 27, Alta.
23.	DIA	Diamond Shamrock Canada Ltd., 150 Consumers Rd., Willowdale, Ont.
24.	DIC	Diamond Alkali (Canada) Ltd., 197 Bartley Dr., Toronto, Ont.
25.	DIE	Diamond Laboratories (Canada) Ltd., 6420-1A St. S.W., Calgary, Alta.
26.	DIT	Ditchling Corp. Ltd., P.O. Box 395, Don Mills, Ont.
27.	DIV	Diversey (Canada) Ltd., 2645 Royal Windsor Dr., Clarkson Postal Station, Mississauga, Ont.
28.	DOL	Dominion Veterinary Laboratories Ltd., 800 Main St., Winnipeg 4, Man.
29.	ELZ	Elston Industries Ltd., 1350 Church Ave., Winnipeg, Man.
30.	ENL	Environmental Laboratories Limited, 25 York Ave., Toronto 334, Ont.
31.	FER	Ferguson's Garden Centre, 9000 St. Francis Rd., P.O. Box 1072, Montreal, Que.
32.	FIR	Fireco Sales Ltd., 33 Racine Rd., Rexdale, Ont.
33.	FIT	A. W. Fish, 811 No. 3 Rd., Richmond, B.C.
34.	FOB	Mr. Charles S. Foreman, 675 W Hastings St., Vancouver, B.C.
35.	FRD	Franklin Laboratories Ltd., 526-7th Ave. S.E., Calgary, Alta.
36.	FRM	Fraser Valley Mushroom Growers Co-op., 496 Prior St., Vancouver 4, B.C.
37.	GIE	George E. Gilbert Equipment Ltd., Box 206, Leamington, Ont.
38.	GIL	Fred Gillmore, 38 Greenbrae Ct., Scarboro, Ont.
39.	GLE	Glendale Agencies, 286 St. Paul St. W., Montreal, Que.
40.	GOO	Goodman and Co., 470 Granville St., Vancouver, B.C.
41.	GRE	Green Valley Fertilizer and Chemical Co. Ltd., P.O. Box 249, Surrey, B.C.
42.	HAW	Haver-Lockhart Service, 3427 9th St. S.E., Calgary 27, Alta.
43.	HAY	Peter V. Hayward, Gulf Agricultural Chemical Co. Ltd., P.O. Box 951, Winnipeg, Man.
44.	HED	Gordon F. Henderson, 116 Albert St., Ottawa, Ont.
45.	HFC	Hercules Incorporated (Canada) Ltd., 1980 Sherbrooke St. West, Montreal, Que.
46.	HUB	Hunter Brand Manufacturing Ltd., 95 Ouest St., Zotique, Montreal 327, Que.
47.	JOS	Ivan J. Jones, 78 Woodland Ave., Chatham, Ont.
48.	KEM	Kem-San Ltd., 1055 Industry St., Oakville, Ont.

INDEX OF CANADIAN AGENT CODES

ITEM	CODE	NAME AND ADDRESS
49.	LEA	Leavens Bros. Ltd., 3220 Dufferin St., Toronto 390, Ont.
50.	LEE	Legate and Tedder Ltd., P.O. Box 775, Orillia, Ont.
51.	LEI	P. Leiner and Sons (Canada) Ltd., 2175 Sheppard Ave. East, Ste. 206, Willowdale 425, Ont.
52.	LEY	Leytosan (Canada) Ltd., 343 Higgins Ave., Winnipeg, Man.
53.	MAH	Magnachem Ltd., 626-58th Ave. S.E., Zone 27, Calgary, Alta.
54.	MAL	Rudoplh G. Malek, 3737 Piper Ave., Burnaby, B.C.
55.	MBY	May and Baker (Canada) Ltd., 180 Bellarmin St., Montreal 11, Que.
56.	MCB	McCain Produce Ltd., East Florenceville, N.B.
57	MCC	McClelland Veterinary Supplies Ltd., P.O. Box 37, St. Hyacinthe, Que.
58.	MCG	Dennis McCracken, P.O. Box 535, Rexdale, Ont.
59.	MCH	McGoun Chemicals Ltd., 5820 Cote St. Francois, Montreal 385, Que.
60.	MCK	W. G. McKinnon, Ste. 201, 185 Bay St., Toronto, Ont.
61.	MCM	Donald MacGregor, 1200 York Mills Rd., Apt. 1605, Don Mills, Ont.
62.	MLL	Lawrence E. Miller, Apt. 504, 6000 Yonge St., Willowdale, Ont.
63.	MLS	Mine Safety Appliances Co. of Canada Ltd., 148 Norfinch Dr., Downsview, Ont.
64.	MOL	Monsanto Canada Ltd., P.O. Box 900, Montreal 3, Que.
65.	NAG	National Garden Supply of Canada Ltd., 145 Duke St., Bowmanville, Ont.
66.	NAQ	Naturalflow Maple Sap Plastic Tubing and Supplies Ltd., St. Emile De Montcalm, Que.
67.	NIB	Niagara Chemicals, Div. of FMC Machinery and Chemicals Ltd., 1274 Plains Rd. East, Burlington, Ont.
68.	NOE	Northland Machinery Supply Co. Ltd., P.O. Box 606, Station F, Thunder Bay, Ont.
69.	PEJ	Penick Canada Ltd., 565 Coronation Dr., West Hill, Ont.
70.	PEL	Pennwalt of Canada Ltd., 700 Third Line Rd., Oakville, Ont.
71.	PIN	Lucien Pinet, 1010 Ste. Catherine St. West, Suite 341, Montreal, Que.
72.	PFF	Pfizer Co. Ltd., 404 N. Front St., Sarnia, Ont.
73.	PLG	Plant Products Co. Ltd., 70 Wesley Ave., Port Credit, Ont.
74.	PSA	Provincial Pest Control Inc., 292 Decarie Blvd., St. Laurent, Montreal 376, Que.
75.	REE	Henry Reinders, Box 2, Drayton, Ont.
76.	REP	Harry D. Reid Agencies Ltd., 25 York Ave., Toronto 334, Ont.
77.	ROP	Rogar/STB Div. of BTI Products Ltd., P.O. Box 213, 805 Castelneau St., Douville, St. Hyacinthe, Que.
78.	SAG	Sanex PC Ltd., 232 Norseman St., Toronto 18, Ont.
79.	SAH	Mrs. Ida M. Sanders, 2859 Dundas St. W., Toronto, Ont.
80.	SEP	Sep-Ko Chemical of Canada Ltd., 1703 Mattawa Ave., Cooksville, Ont.
81.	SEV	Seven Cities Food Brokers Ltd., 898 King Edward St., Winnipeg 21, Man.
82.	SHH	Harry Sharp and Son, Ltd., 62 Malkin St., Vancouver 4, B.C.
83.	SHY	Gerald Shaughnessy, 168 Warden Ave., Scarborough 714, Ont.
84.	SIL	Norman Silver, 121 Richmond St. West, Ste. 905, Toronto 1, Ont.
85.	SMT	J. A. Kennetn Smith, 2 Plaisance, Touraine, Que.
86.	SOJ	Soluja Ltee., 620 Cathcart, Ste. 400, Birks Bldg., Phillips Square, Montreal 111, Que.
87.	SUH	Sumitomo Shoji Canada Ltd., Ste. 2301, Commerce Court West, P.O. Box 53, Commerce Court Postal Station, Toronto, Ont.
88.	TAC	The Tack Shop, 311-17th Ave. S.W., Calgary, Alta.
89.	TAY	Tom Taylor Co. Ltd., 136 Adelaide St. East, Toronto, Ont.
90.	VAN	Vansco Sales, P.O. Box 3957, Station D, Vancouver 9, B.C.
91.	VAR	Van Waters and Rogers Ltd., 2625 Skeena St., Vancouver, B.C.
92.	VIR	Virchem of Canada Ltd., 1440 Tenth St. E., P.O. Box 307, Cornwall, Ont.
93.	WAG	G. A. Wagner, 1500 Stanley St., Ste. 531, Montreal 2, Que.
94.	WAL	Watkins Products Inc., 90 Annabella St., Winnipeg, Man.
95.	WEL	Wellcome Div. of Agropharm Ltd., P.O. Box 500, Lachine, Que.
96.	WER	Western Brand Products Ltd., 10584-107th St., Edmonton, Alta.

O. Reg. 618/74, Table 1.

TABLE 2

INDEX OF REGISTRANT CODES

ITEM	CODE	NAME AND ADDRESS
97.	AAG	N V Aagrunol Chemical Works,Osterkade 10,Gronigen,Holland
98.	ABB	Agricultural and Veterinary Products Div.,Abbot Labs.,Abbott Park, North Chicago,Illinois 60064,U.S.A.
99.	ABE	Abell Waco Ltd.,246 Attwell Dr.,Rexdale,Ont.
100.	ABL	Able Atomic Pest Control Co.,1655 Edouard Laurin Blvd.,Montreal 9,Que.
101.	ACE	Aceline Products Corp.,P.O. Box 236,27 Gorsham St.,Rochester 5,N.Y.,U.S.A.
102.	ACM	Acme Chemical Products,299 Niagara St.,Toronto 3,Ont.
103.	ACO	Acophram Div. of Noco Drugs Ltd.,24 Stable St.,Toronto 15,Ont.
104.	ADL	Adroit Enterprises,Box 66,Station C,Winnipeg,Man.
105.	AEF	Aerosol Fillers Inc.,5475 Ramsay Rd.,St. Hubert,Que.
106.	AER	Aerosol Blitzer Co.,10 Dell Park Ave.,Toronto 19,Ont.
107.	AIG	Air Guard Control of Canada Ltd.,76 Martin Ross Ave.,Downsview 463,Ont.
108.	AIK	Airken of Canada Ltd.,3258 Wharton Way,Mississauga,Ont.
109.	AIR	Air-Way Distributor of Ontario,3281 Yonge St.,Toronto 12,Ont.
110.	ALG	All Canada Vacum Service,2786 Yonge St.,Toronto 12,Ont.
111.	ALL	Allied Chemical Canada Ltd.,1155 Dorchester Blvd. W.,Montreal 102, Que.
112.	ALM	Alma Paint and Varnish Co. Ltd.,P.O. Box 2274,Terminal A,65 Duke St.,London, Ont.
113.	ALF	Alfco Rokeby Co. Inc.,2nd. and St. Clair Sts.,Marietta,Ohio 45750,U.S.A.
114.	ALS	Allied Chemical Services Ltd.,5507 First St. S.E.,Calgary,Alta.
115.	ALT	Al-Si-Co Limitee,150 Seigneuriale,Beauport,Que.
116.	ALW	Alberta Wheat Pool,Wheat Pool Building,505-2nd. Street S.W.,Calgary,Alberta
117.	AMC	Amchem Products Inc.,Brookside Ave.,Ambler,Pa. 19002,U.S.A.
118.	AMF	America Laboratories,7330 Rue St. Hubert,Montreal,Que.
119.	AMW	Amway Sales Corp.,7575 E. Fulton Rd.,Ada,Michigan,U.S.A.
120.	ANA	Anabros Inc.,3312 Place Victoria,Montreal 115,Que.
121.	ANI	Animal Repellents Inc.,P.O. Box 168,Griffin,Georgia 30223,U.S.A.
122.	ANS	Ansul Co.,1 Stanton St.,Marinette,Wisconsin 54143,U.S.A.
123.	APB	Applied Biochemists Inc.,5300 W. County Line Rd.,P.O. Box 25,Mequon, Wisconsin 53092,U.S.A.
124.	ARC	Arc Enterprises Ltd.,4686 Marine Dr.,Burnaby 1,B.C.
125.	ATL	Laboratoire Atlas Engr.,4101 Notre-Dame St.,Montreal,Que.
126.	AVM	Avmor Ltd.,431 St. Helen St.,Montreal,Que.
127.	AVP	Avon Products of Canada Ltd.,5500 Trans Canada Highway,Pointe Claire,Que.
128.	AYH	Ayerst Laboratories,Div. of Ayerst,McKenna and Harrison Ltd.,Box 6115, Montreal,Que.
129.	BAD	Baird and McGuire,Inc.,Holbrook,Mass.,U.S.A.
130.	BAI	Baird and McGuire Canada Ltd.,445 21st. Ave.,Lachine,Que.
131.	BAP	Bapco Paint Ltd.,201 Belleville St.,Victoria,B.C.
132.	BAR	Barnett Chemical Products Co.,3018 Frankford Ave.,Philadelphia,Pa. 19134, U.S.A.
133.	BAT	The N.M.Bartlett Manufacturing Co. Ltd.,Box 490,Beamsville,Ont.
134.	BAZ	BASF Canada Ltd.,5850 Cote de Liesse Rd.,Town of Mt. Royal,Que.
135.	BBE	B.B.Extermination Inc.,1805-5e Ave.,Shawinigan-Sud,Que.
136.	BCC	B.C.Pest Control Ltd.,2511 W. Broadway,Vancouver 9,B.C.
137.	BEA	Beacon Chemicals Ltd.,175 Margaret St.,Milton,Ont.
138.	BEC	Bell's Ltd.,15-15th. St. W.,Prince Albert,Sask.
139.	BLM	M.Roger Bergeron,1240 Gilford,Montreal 176,Que.
140.	BEN	Benjamin Moore and Co. Ltd.,15 Lloyd Ave.,Toronto 9,Ont.
141.	BEP	Bernal Laboratories Ltd.,355 St. Peter St.,Montreal,Que.

ITEM	CODE	NAME AND ADDRESS
142.	BET	F. Bertrand and Fils,1414 St. Clement,Montreal 4,Que.
143.	BIE	Bikoe Manufacturing Co. Ltd.,434 Queen St. E.,Toronto 2,Ont.
144.	BIR	Birch Fumigators,10540-101st. St.,Edmonton,Alta.
145.	BLB	W.A.Blackburn,1570 Lepine Sr.,St. Laurent 9,Que.
146.	BMC	B and M Chemicals,290 York St.,P.O. Box 94,Hamilton,Ont.
147.	BOB	Borderland Products Inc.,Box 360,Buffalo,N.Y. 14240,U.S.A.
148.	BOY	Boyle-Midway (Canada) Ltd.,2 Wickham Rd.,Toronto 18,Ont.
149.	BPC	BP Canada Ltd.,1245 Sherbrooke St. W.,Montreal 25,Que.
150.	BRD	Bradford Fertilizer Co. Ltd.,Box 1000,Bradford,Ont.
151.	BRF	Bristol-Myers Products Canada,111 Richmond St. W.,Toronto 110,Ont.
152.	BRG	The British American C hemical Co. Ltd.,1355 St. John St.,Regina,Sask.
153.	BRH	British American Chemical Co. Ltd.,8321 Willard St.,Burnaby 3,B.C.
154.	BRJ	Dr.L.P.Brisson,350 Chemin Larocque,Valleyfield,Que.
155.	BRL	British Mercantile Co. Ltd.,444 Dunsmuir St.,Vancouver,B.C.
156.	BRP	Stanley Brock Ltd.,145 Market Ave. E.,Winnipeg 2, Man.
157.	BRT	Brookdale-Kingsway Ltd.,Dule St.,Bowmanville,Ont.
158.	BUG	Buggo Insecticide Ltd.,5 Clark Dr.,Chilliwack,B.C.
159.	BUK	W.K. Buckley Ltd.,559 College St.,Toronto 4,Ont.
160.	CAA	Cadillac Products Reg'd.,373 Des Sables,Quebec,Que.
161.	CAC	Canada Packers Ltd.,Shur-Gain Div.,St. John,N.B.
162.	CAI	Canada Packers Ltd.,Fine Chemicals Dic.,55 Glen Scarlett Rd.,Tor.,Ont.
163.	CAL	Chempac Aerosales Ltd.,6041 St. S.E.,Calgary 27,Alta.
164.	CAM	Canada West Products Co.,718 Second Ave.,S.W.,Calgary,Alta.
165.	CAO	Canadian Adhesives Ltd.,420 Marien Ave.,Montreal East,Que.
166.	CAP	Canadian Co-operative Wool Growers Ltd.,40 St. Clair Ave. E.,Toronto 7, Ont.
167.	CAR	Canadian Copper Refiners Ltd.,1700 Bank of Nova Scotia Bldg.,Toronto 1, Ont.
168.	CAT	Cantol Ltd.,199 Steelcase Rd.,Don Mills,Ont.
169.	CAV	Canadian Germicide Co. Ltd.,591 The Queensway,Toronto 18,Ont.
170.	CAX	Canadian Hoechst Ltd.,4045 Cote Vertu Blvd.,Montreal 383,Que.
171.	CAY	Canadian Industrial Sanitation Ltd.,P.O. Box 173,Montreal Int'l.Airport Montreal 300,Que.
172.	CBA	Canadian Industries Ltd.,Paints Div.,P.O. Box 10,Montreal,Que.
173.	CBB	Canadian Industries Ltd.,Box 5201,London,Ont.,N6A 4L6.
174.	CBC	Canadian Saltfish Corp.,P.O. Box 6088,Royal Trust Bldg.,St.John's,Nfld.
175.	CBD	Canadian Sugar Factories Ltd.,306-10th. St. S.,Lethbridge,Alta.
176.	CBE	Canadian Tire Corp. Ltd.,837 Yonge Street,Toronto,Ont.
177.	CBG	Canadian Products Inc.,130 Poul. Industriel,Boucherville,Que.
178.	CBK	Congard Industries Ltd.,1377 Winnipeg Ave.,Winnipeg 3,Man.
179.	CBL	Cardel Products, Box 125,Richmond Hill,Ont.
180.	CBM	Carbola Chemical Co. Inc.,Sub. of Int'l.,Talc Co. Inc.,Natural Bridge, N.Y.,U.S.A.
181.	CBR	Carmel Chemical Corp.,P.O. Box 406,Westfield,Indiana,U.S.A.
182.	CBT	Cartier Chemical Co. Ltd.,445-21st. Ave.,Lachine,Que.
183.	CEL	Celanese Canada Ltd.,800 Dorchester Blvd. West,Montreal,Que.
184.	CER	Certified Laboratories of Canada Ltd.,P.O. Box 460,Brampton,Ont.
185.	CGA	Ciba-Geigy Agr. Chem.,Div. of Giba-Geigy Can. Ltd.,1 Westside Dr., Etobicoke,Ont.
186.	CGC	Giba-Geigy Canada Ltd.,Consumer Products Div.,630 Evans Ave.,Toronto,Ont.
187.	CGD	Giba-Geigy Canada Ltd.,Dyestuffs Div.,205 Bouchard Blvd.,Dorval 780,Que.
188.	CHA	Chatfield Distributors Ltd.,168 Bannatyne Ave.,Winnipeg 2,Man.

ITEM	CODE	NAME AND ADDRESS
189.	CHD	Chapman Chemical (Canada) Ltd.,Ste. 2601-1155 Dorchester Blvd. W., Montreal 2,Que.
190.	CHF	Chem Mark of Canada Ltd.,41 Maple Ave.,Thornhill,Ont.
191.	CHG	Chemargo, A Div. of Baychem Corp.,Box 4913,Kansas City,Missouri 64120 U.S.A.
192.	CHM	Chempar Chemical Co. Inc.,260 Madison Ave.,N.Y.,N.Y. 10016,U.S.A.
193.	CHP	Chipman Chemicals Ltd.,519 Parkdale Ave. N.,Hamilton,Ont.
194.	CHR	Laboratories Choisy Ltee.,390 Boulevard Est.,Louisville,Que.
195.	CHV	Chevron Chemical (Canada) Ltd.,Ortho Div.,1060 Industry St.,Oakville,Ont.
196.	CIJ	Circle Sales Janitor Supplies Ltd.,472 Mill St.,P.O. Box 331,Kitchener,Ont.
197.	CLA	W.A.Cleary Corp.(Canada) Ltd.,48 Dundas St. W.,P.O. Box 178,Belleville,Ont.
198.	CLI	Fred Cline and Associates,4044 Xerxes Ave.,S.,Minneapolis,Minnesota 55410 U.S.A.
199.	CMS	Canadian Mill Supply Co. Ltd.,451 Ellesmere Rd.,Scarborough 733,Ont.
200.	COA	Cobra International Inc.,P.O. Box 985,Bayamon,Puerto Rico 00619
201.	COI	Connecticut Chemicals Ltd.,24 Curity Ave.,Toronto 16,Ont.
202.	COK	Continental Chemical Co.,4535 Hotel de Ville,Montreal 153,Que.
203.	CON	Consolidated Paint and Varnish Canada Ltd.,P.O. Box 396,Montreal N 450,Que
204.	COO	Cooke Laboratories Inc.,1939-41 East Sergeant St.,Philadelphia,Pa.19125, U.S.A.
205.	COP	Co-operative Federee de Quebec,Marche Central Metropolitain,Montreal,Que.
206.	COQ	Cooper Div. of Agropharm Ltd.,P.O. Box 500,La Salle,Que.
207.	COR	William Cooper and Nephews Inc.,1909-25 Clifton Ave.,Chicago,Ill.60614, U.S.A.
208.	COS	Copeland Laboratories Ltd.,41 Racine Rd.,Rexdale,Ont.
209.	COV	Cooper,McDougall and Robertson Ltd.,Berkhamsted,England
210.	COX	Benoit Courteau, 38 C Beauchemin,Cap de la Madeleine,Que.
211.	COY	Mr. Marcel Cournoyer,Saint Jude Co.,St. Hyacinthe,Que.
212.	CRA	Colin Ross Aerosols Ltd.,2920 23rd. Ave.,S.W. Calgary 4,Alta.
213.	CRC	Cromac Chemicals Co. Ltd.,203 Bentworth Ave.,Toronto,Ont.
214.	CRL	The Crown Diamond Paint Co. Ltd.,41 Bates Rd.,Outremont,Montreal 8,Que.
215.	CRS	Cross Canada Sales,2043 Avenue Rd.,Toronto,Ont.
216.	CUP	Cuprinol Ltd.,Adderwell,Frome,Somerset,England.
217.	CUT	Cutter Laboratories Inc.,Fourth and Parker St.,Berkeley,Ca. 94710,U.S.A.
218.	CNK	Conklin Products Ltd.,2250 Albert St. Regina,Sask.
219.	CYC	Cyanamid of Canada Ltd.,635 Dorchester Blvd. West,Montreal,Que.
220.	DAC	Daco Lab. Ltd.,1222 Trafalgar St.,London,Ont.
221.	DAI	Davies Irwin Ltd.,121 Bates Rd.,Montreal 256,Que.
222.	DAL	Davis and Lawrence Co. (Canada) Ltd.,1890 Brampton St.,Hamilton,Ont.
223.	DEA	Deane and Co. (Div. of Isbru Co. Ltd.),190 Oneida Dr.,Pointe Claire 730, Que.
224.	DER	Debrox Chemical Products Ltd.,20 Milwick Dr.,Unit 6A,Weston,Ont.
225.	DIF	Dean Distributors,1901 Avenue Rd.,Toronto,Ont.
226.	DIA	Diamond Shamrock Canada Ltd.,150 Consumers Rd.,Willowdale,Ont.
227.	DIB	Diamond Shamrock Corp.,300 Union Commerce Bldg.,Cleveland,Ohio44114,U.S.A.
228.	DID	Diamond Laboratories Inc.,P.O. Box 863,Des Moines,Iowa 50304,U.S.A.
229.	DIE	Diamond Lab. (Canada) Ltd.,6420-1A St.,S.W.,Calagary,Alta.
230.	DIF	Diamond Alkali Co.,300 Union Commerce Bldg.,Cleveland,Ohio 44115,U.S.A.
231.	DIN	Dinaric Traders Ltd.,250 Bloor Street E.,Ste No. 1,Toronto,Ont.
232.	DIS	Dispar Inc.,1321 De Lanaudiere,Joilette,Que.

ITEM	CODE	NAME AND ADDRESS
233.	DIT	Ditchling Corp. Ltd.,P.O. Box 395,Don Mills,Ont.
234.	DIV	Diversey (Canada) Ltd.,2645 Royal Windsor Dr.,Clarkson Postal Stn., Mississauga,Ont.
235.	DOE	Dominion Pest Control Co.,877 Boyd Ave.,Ottawa,Ont.
236.	DOO	Domtar-Chemicals Ltd.,Wood Preserving Div.,395 de Maisonneuve Blvd. West, Montreal 101,Que.
237.	DOW	Dow Chemical of Canada Ltd.,Highway No. 40,Sarina,Ont.
238.	DTC	Drug Trading Co. Ltd.,15 Ontario St.,Toronto 2,Ont.
239.	DUB	Dubois Chemicals of Canada Ltd.,64 Kenhar Drive,Weston,Ont.,M9L 1N3.
240.	DUC	Duchensneau and Fils,1386 Bord de l'eau,Ste. Dorothee,Ville de Laval,Que.
241.	DUH	N.V.Philips-Duphar,Apollolaan 151,Amsterdam-Zuid,Holland
242.	DUQ	Du Pont of Canada Ltd.,Box 26,Toronto Dominion Centre,Toronto 1,Ont.
243.	DUR	Dural Products Ltd.,550 Marshall Ave.,Dorval,Que.
244.	DUS	Produits Durable Engr.,4219 Hogan St.,Montreal 178,Que.
245.	DUT	Dustbane Enterprises Ltd.,Dustbane Mfg. Div.,Box 381,Terminal A,Ottawa,Ont
246.	DUV	Distributeurs Doverney Inc.,6189 Levesque Blvd.,Cite Laval,St. Vincent de Paul,Que.
247.	DAR	Darworth Canada Ltd.,728 Renaud Ave.,Dorval,Quebec.
248.	EAN	The T. Eaton Co. Ltd.,58 Hayter St.,Dept. 1016,Toronto,Ont.
249.	EAT	J.T.Eaton and Co. Inc.,3110 West 65th. St.,Cleveland,Ohio.
250.	ECK	Eckroat Seed Co.,1106 North Eastern Ave.,Oklahoma City,Oklahoma,U.S.A.
251.	ECO	Economic Products Co. Inc.,P.O. Box 985,Shenandoah,Iowa 51601,U.S.A.
252.	ELA	Elanco Prod. Div.,Eli Lilly and Co. (Canada) Ltd.,P.O. Box 4037,Term.A, Toronto,Ont.
253.	ELI	Electric Insect Killer,4219 Hogan St.,Montreal 34,Que.
254.	EIL	Electric Reduction Co. of Canada Ltd.,2 Gibbs Rd.,(Toronto),Islington 678 Ont.
255.	ELN	Electrolux (Canada) Ltd.,2751 Trans Canada Highway,Point Claire,Que.
256.	ELS	Elsco Co.,4330 West Hill Ave.,Montreal 28,Que.
257.	ENI	Ensign Industrials Ltd.,P.O.Box 405,33 Carlton St.,St.Catherines,Ont.
258.	ESC	W.H.Escott Co. Ltd.,129 McDermot Ave. E.,Winnipeg 2,Man.
259.	EMA	Emery Industries (Canada) Ltd.,425 Kipling Ave.,Toronto,Ont.
260.	FAB	Faberge of Canada Ltd.,P.O. Box 800,Downsview,Ont.
261.	FAP	Familex Products Co.,1600 rue Delorimier,Montreal,Que.
262.	FAR	Farnam Co.,8801 North 29th. St.,P.O. Box 68,Omaha,Nebraska 68112,U.S.A.
263.	FAV	Favorite Products Co. Ltd.,730 Salaberry St.,Laval,Que.
264.	FED	Federal Grain Ltd.,P.O. Box 1500,Winnipeg,Man.
265.	FEG	G.H.Ferguson Ltd.,2988 Burn Rd.,Port Coquitlam,B.C.
266.	FEJ	Ferguson Fumigants (Canada) Ltd.,246 Attwell Dr.,Rexdale,Ont.
267.	FEP	Federal Pest Control Reg'd.,3711 Belair St.,Montreal 453,Que.
268.	FIL	The Filter Queen Corp. Ltd.,205 Norseman St.,Toronto,Ont.
269.	FIS	Fisons (Canada) Ltd.,26 Prince Andrew Place,Don Mills,Ont.
270.	FLB	Flintkote Co. of Canada Ltd.,P.O. Box 160,Postal Station N,Toronto 510,On
271.	FLR	Produits Florence Products Inc.,5016 Papineau Ave.,Montreal,Que.
272.	FMC	FMC of Canada Ltd., 1274 Plains Rd., E.,Burlington, Ont.

ITEM	CODE	NAME AND ADDRESS
273.	FRC	Franklin Laboratories Inc.,1777 South Vellaire St.,Denver,Colorado 80222, U.S.A.
274.	FRD	Franklin Laboratories Ltd.,526-7th. Ave.,S.E. Calgary,Alta.
275.	FUB	Fuller Brush Co. Ltd.,1115 Guelph Line,Burlington,Ont.
276.	FUL	Fuller System Inc.,226 Washington St.,Woburn,Mass. 01801,U.S.A.
277.	FUM	Fumi-Products Co. Ltd.,Box 466,Terminal A,Ottawa, Ont.,K1N 8S3.
278.	GAC	Gaetz Cornett Drug and Book Co.,4901 Gaetz Ave.,Red Deer,Alta.
279.	GAH	Garden Hose Spray Co.,P.O. Box 459,Rt. No. 107 Province Rd.,Laconia, New Hampshire 03246,U.S.A.
280.	GAL	The Gardeners Sales Ltd.,Chemical Div.,984 Powell Ave.,Winnipeg 21,Man.
281.	GAP	Gardo Products Ltd.,C.P. 100,Waterloo,Que.
282.	GCP	Green Cross Products,Div. of Giba Co. Ltd.,2875 Centre St.,Montreal 104, Que.
283.	GED	Geigy Dyestuffs,Div. of Geigy (Canada) Ltd.,8420 Darnley Rd.,Montreal 9, Que.
284.	CEI	Geigy Consumer Products,Div. of Geigy Canada Ltd.,Brighton,Ont.
285.	GEK	General Pest Control Co. Ltd.,127 Charing Cross,Brantford,Ont.
286.	GEN	General Paint Corp. of Canada Ltd.,950 Raymur Ave.,Vancouver 6,B.C.
287.	GEP	General Paint Corp of Canada Ltd.,Colorizer Div.,950 Raymur Ave., Vancouver 6,B.C.
288.	GER	T.E.Gerhardt,Box 17,Fort Fraser,B.C.
289.	GHI	G.H.Import Co.,4275,rue Iberville,Montreal,Que.
290.	GOC	Goddard Chemicals (1965) Ltd.,P.O. Box 328,Sidney,B.C.
291.	GRA	Greenleaf Garden Supplies Ltd.,4612 Dawson St.,Burnaby 2,B.C.
292.	GRC	Great Lakes Chemical Corp.,c/o Laurence and Laurence,753 Warner Bldg., Washington D.C. 20004,U.S.A.
293.	GRE	Green Valley Fertilizer and Chemical Co.,P.O. Box 249,Surrey,B.C.
294.	GRG	W.E.Greer Ltd.,14704-119 Ave.,Edmonton,Alta.
295.	GRI	Dr. Grignon Ltd.,Veterinary Pharmacy,208 St. Paul St.,West,Montreal 1,Que.
296.	GRO	Growers Supply Co. Ltd.,421 Cawston Ave.,Kelowna,B.C.
297.	GRP	Gray Products,37 Hanna Ave.,Toronto,Ont.,M6K 1W9.
298.	GUA	Guardian Chemicals,1600 Toronto St.,Regina,Sask.
299.	GUF	Gulf Agricultural Chemicals Co.,882 St. James St.,Winnipeg,Man.
300.	GUL	Gulf Oil Corp.,Gulf Bldg.,Pittsburg,Pa. 15230,U.S.A.
301.	GUM	Gulf Oil Canada Ltd.,800 Bay St.,Toronto 5,Ont.
302.	GUS	Gustafson Manufacturing Inc.,Hopkins,Minnesota 55343,U.S.A.
303.	HAB	Walter Haertel Co.,2840 Fourth Ave. S.,Minneapolis,Minn. 55408,U.S.A.
304.	HAC	Rolf C. Hagan Ltd.,3225 Sartelon St.,Montreal 9,Que.
305.	HAE	Handy Chemicals Ltd.,1850 Ste. Helene Ave.,Jacques Cartier,P.Q.

ITEM	CODE	NAME AND ADDRESS
306.	HAF	Hancocl Laboratories,Box 1407,Summerside,P.E.I.
307.	HAG	G.C.Hanford Mfg. Co. Ltd.,Kingston Rd. W.,Brockville,Ont.
308.	HAU	Hartz Mountain Pet Supplies Ltd.,1125 Talbot St.,St.Thomas,Ont.
309.	HAV	Haver-Lockhart Laboratories,P.O. Box 390,Shawnee,Kansas 66201,U.S.A.
310.	HEB	Heitson N.V.,P.O. Box 21,Bergum,Holland
311.	HEF	Hercule Mfg. Reg'd.,7538 St-Gerrard,Montreal,Que.
312.	HEG	Heritage Manufacturing Co. Ltd.,P.O. Box 265,60 Alness St.,Downsview,Ont.
313.	HFB	Hercules Agricultural Chemicals,Synthetics Dept.,910 Market St., Wilmington,Delaware 19899,U.S.A.
314.	HIL	Hilo Products Div.,Nip-Co. Mfg. Ltd.,56 Newcastle St.,Toronto 18,Ont.
315.	HOB	Hodgson and Fraser Ltd.,1242 Vickers Way,Richmond,B.C.
316.	HOL	J.I.Holcomb Mfg. Co. Canada Ltd.,890 Caledonia Rd.,Toronto 395,Ont.
317.	HOO	Hooker Chemical Corp.,P.O. Box 344,Niagara Falls,New York,U.S.A.
318.	HOS	House of Sturgeon (National) Ltd.,200 Norelco Dr.,Weston,Ont.
319.	HOY	Houston Chemical Co.,Div. of PPG Industries Ltd.,One Gateway Center, Pittsburg,Penn. 15222,U.S.A.
320.	HUL	Huntington Lab. of Canada,15 Victoria Crescent,Bramalea,Ont.
321.	HYD	Hydroponic Chemical Co. Inc.,P.O. Box 97-C,Copley 21,Ohio,U.S.A.
322.	HYN	Hysan Corporation,919 West 38th. St.,Chicago,Illinois 060609,U.S.A.
323.	IDA	Cie Ideal Import Ltee.,10,000 Parkway Blvd.,Ville d'Anjou,Montreal 437,Que
324.	IDE	Les Engrais Ideal Ltee.,St. Remi,Cte Napierville,Que.
325.	IMP	Imperial Oil Ltd.,Chemical Products Dept.,111 St. CLair Ave. W.,Toronto 7, Ont.
326.	INA	Independent Druggists Alliance Distributing Co. Ltd.,15 Ontario St., Toronto,Ont.
327.	IND	Industrial Supply House,2811 Dufferin St.,Toronto 19,Ont.
328.	INJ	International Diatoms Ltd.,1125 Mont Royal St. Est.,Montreal 176,Que.
329.	INL	International Minerals and Chemocal Corp.,(Canada)Ltd.,4 King St. W., Room 1302,Toronto 105,Ont.
330.	INP	International Paints (Canada) Ltd.,126 Harbour Ave.,North Vancouver,B.S.
331.	INR	International Stock Food Co. Ltd.,1020 Dupont St.,Toronto 4,Ont.
332.	INS	International Laboratories (1957) Ltd.,490 Des Meurons St.,St.Boniface,Man
333.	INT	Interprovincial Co-ops Ltd.,P.O. Box 1050,Saskatoon,Sask.
334.	INV	Interprovincial Co-operatives Ltd.,123 rue Halifax,Moncton,N.B.
335.	JBD	J.B. and D. Co. Ltd.,Unionville,Ont.
336.	JET	Jet-Aer Corp.,100 Sixth Ave.,Paterson,N.J. 07524,U.S.A.
337.	JIT	La Cie, Produits Jito Ltee.,5130 rue St-Hubert,Montreal,Que.
338.	JOE	Johnson's Extermination and Pest Control Service,Minden,Ont.
339.	JOH	S.C.Johnson Pressurized Products Ltd.,1 Webster St.,Brandford,Ont.
340.	JON	Johnson Nurseries (Kingston) Ltd.,155 Brock St.,Kingston,Ont.

ITEM	CODE	NAME AND ADDRESS
341.	JUD	Judd Ringer Corp.,6860 Flying Cloud Dr.,Eden Prairie,Minnesota 55343, U.S.A.
342.	KAL	Kalim Pet Products Ltd.,Albert St.,Redditch,Worcestershire,England
343.	KEG	Kelly Green Horticultural Products,Box 2111,Terminal A,London,Ont.
344.	KEL	Kemin (Chemical) Industries Inc.,2104 Maury St.,Des Moines,Iowa 50301, U.S.A.
345.	KEM	Kem-San Products Ltd.,1055 Industry St.,Oakville,Ont.
346.	KEN	W. Alan Kennedy Ltd.,P.O. Box 1356,Sydney,N.S.
347.	KEO	Kennecott Copper Corp.,Special Prod. Div.,6065 Hillcroft,Ste. 500,Houston Texas 77036,U.S.A.
348.	KEK	Kem Manufacturing Canada Ltd.,1316 Blundell Rd.,Mississauga,Ont.
349.	KER	Kerr-McGee Chemical Corp.,Kerr-McGee Bldg.,Oklahoma City,Oklahoma 73102, U.S.A.
350.	KET	Kert Chemical Industries Ltd.,171 Fenmar Drive,Weston,Ont.
351.	KEY	Key Chemicals Inc.,P.O. Box 37,Anacortes,Washington 98221,U.S.A.
352.	KIN	King Calcium Products Co. Ltd.,Campbelville,Ont.
353.	KLN	Kleen Craft Products Ltd.,Box 3234,Vancouver 3,B.C.
354.	KVL	K-Vet Laboratories Ltd.,P.O. Box 878,Hespeler,Ont.
355.	LAC	Laboratoire Dr. Pierre,294 St-Paul ouest,Montreal,Que.
356.	LAI	Lamb Naturalflow,Inc.,2996 Belgium Rd.,Baldwinsville,N.Y. 13027,U.S.A.
357.	LAL	Lalco Limitee,4570 Mentana,Montreal,Que.
358.	LAT	Later Chemicals Ltd.,320 Lysander Lane,Richmond,B.C.
359.	LAU	Laurentian Laboratories Ltd.,70 Hymus Blvd.,Montreal 33,Que.
360.	LAV	Laurentide Chemicals Inc.,4650 5e Ave.,Shawinigan-Sud,Que.
361.	LED	E.H.Leitte Co. of Canada,88-24th St.East,Saskatoon,Sask.
362.	LEG	Lepage's Ltd.,50 West Dr.,Bramalea,Ont.
363.	LEO	Lemoine Tropica,Inc.,2115 Old Orchard Ave.,Montreal 260,Que.
364.	LET	Lethelin Products Co. Inc.,15 MacQuesten Parkway So.,Mount Vernon, New York,U.S.A.
365.	LEW	Lewis Cattle Oiler Co.,Box 28,Oak Lane,Man.
366.	LIE	G.J.Liebich (Canada) Ltd.,394 Gertrude Ave.,Winnipeg 13,Man.
367.	LIO	Lion Insecticide Co. Ltd.,No. 24,2-Chrome Andojibashi-dori,Minami-ki, Osaks,Japan
368.	LOR	Dr. Leo Lorrain Lobaratories Ltd.,203 Place Youville,Montreal 1,Que.

ITEM	CODE	NAME AND ADDRESS
369.	MAG	Magna Corp.,11808 South Bloomfield Ave.,Santa Fe Springs,California 90670,U.S.A.
370.	MAP	Mallinckrodt Chemical Works Ltd.,600 Delmar Ave.,Pointe Claire,Que.
371.	MAR	Manchester Products Ltd.,87 Ainsle St. S.,P.O. Box 204,Galt,Ont.
372.	MAT	Maple Leaf Mills Ltd.,P.O. Box 370,Station A,Toronto 1,Ont.
373.	MAZ	Les Products Macr-O Limitee,Case Postale 604,3175,rue Girard,Trois-Rivieres,,Que.
374.	MBB	Marine Electrolysis Eliminator Co.,1137 W.Hanford,Seattle,Washington 98134,U.S.A.
375.	MBE	Marquette Products Ltd.,25 Courcelette St.,Quebec,Que.
376.	MBM	Bob Martin (Export) Ltd.,Hogton St.,South,Port,Lancashire,Eng.
377.	MBS	E.M.Matson Jr. Co.,7808 8th Ave. S.,Seattle,Washington 98108,U.S.A.
378.	MBY	May and Baker (Canada) Ltd.,180 Bellarmin St.,Montreal 11,Que.
379.	MCC	McClelland Veterinary Supplies Ltd.,P.O. Box 37,St. Hyacinthe,Que.
380.	MCE	Monclair Exterminating Reg'd.,203 Place Youville,Montreal 125,Que.
381.	MCI	McIntyre's P.O. Box 295,Swift Current,Sask.
382.	MCO	Kohn G. McKirdy,547 S. Syndicate Ave.,Thunder Bay F.,Ont.
383.	MCX	McEwen's Pahrmacy,Box 190,Wesport,Ont.
384.	MEC	Merck Sharp and Dohne Canada Ltd.,P.O. Box 899,Pointe Claire,Dorval 700, Que.
385.	MED	Medical Supply Co.,1027 W. State Rd.,Rockford,Ill. 61101,U.S.A.
386.	MEN	Produits Menagers du Quebec Inc.,644 rue Dollard,Quebec 8,Que.
387.	MET	Metasol Canada Ltd.,P.O. Box 2000,Pointe Claire,Dorval 700,Que.
388.	MEX	Produits Sanataires Meteor Inc.,903 Boul. Rosemont,Montreal,Que.
389.	MGK	McLaughlin Gormley King Co.,1715 Fifth St. S.E.,Minneapolis 14,Minnesota U.S.A.
390.	MIC	Michael's Equipment and Industries Ltd.,P.O. Box 232,Terminal A,Ottawa, Ont.
391.	MIF	Midland Laboratories,210-220 Jones St.,Dubuque,Iowa,U.S.A.
392.	MIJ	Midwest Supplies Ltd.,730 Madison St.,Winnipeg 12,Man.
393.	MIL	R.G.Mitchell,Pharmacist,309 N. Algoma St.,Thunder Bay,Ont.
394.	MMC	Miller-Morton Co. Canada Ltd.,1912A Avenue Rd.,Toronto 380,Ont.
395.	MOA	Momar (Canada) Ltd.,P.O. Box 2400,Don Mills,Ont.
396.	MOB	Mobil Paint Co.,645 Coronation Dr.,P.O. Box 200,West Hill,Ont.
397.	MOD	Modern Pool Products,737 Canal Street,Stanford,Connecticut 06902,U.S.A.
398.	MOL	Monsanto Canada Ltd.,P.O. Box 900,Montreal 3,Que.
399.	MOM	L.Morency and Fils Inc.,P.O. Box 278,Montreal North,Que.
400.	MON	Montreal Pest Control Inc.,8189 St. Hubert St.,Montreal 11,Que.
401.	MOP	Moore Sales,24 Sable St.,Toronto 15,Ont.
402.	MOR	Moran Chemical Co. Ltd.,7944-48-14th Ave.,St.Michei,Montreal ,Que.
403.	MRP	Mont-Royal Paints Inc.,5669 Casgrain St.,Montreal 14,Que.
404.	MRZ	Marzone Chemicals Ltd.,P.O. Box 209,Brooklin,Ont.
405.	MTC	M.T.C. Pharmaceuticals Ltd.,1890 Brampton St.,Hamilton,Ont.
406.	MUL	Muskol Lures,P.O. Box 644,Truro,N.S.
407.	MUS	Mushroom Supply Co.,Toughkenamon,Pa.,U.S.A.
408.	NAA	National Chemical Exterminating Co. Ltd.,1430 Clark St.,Montreal,Que.
409.	NAC	National Chemsearch of Canada Ltd.,245 Orenda Rd.,Bramalea,Ont.
410.	NAL	National Grain (1968) Ltd.,512 Grain Exchange Bldg.,Winnipeg 2,Man.

ITEM	CODE	NAME AND ADDRESS
411.	NAP	Nor-Am Agricultural Products Ltd.,345 Higgins Ave.,Winnipeg,Man.
412.	NAT	National Laboratories,Div. of Sterling Drug Ltd.,37 Hannas Ave.,Toronto, Ont.
413.	NIB	Niagara Chemicals,Div. of FMC Machinery and Chemicals Ltd.,1274 Plains Rd. East,Burlington,Ont.
414.	NIM	Nip-Co Mfg. Ltd.,56 Newcastle St.,Toronto 18,Ont.
415.	NIP	Nippon Importing Co.,59 Wellington W.,Toronto,Ont.
416.	NNP	Northern Paint Co. Ltd.,394 Gertrude Ave.,Winnipeg 13,Man.
417.	NOA	The Northern Paint and Varnish Co. Ltd.,P.O. Box 217,Owen Sound,Ont.
418.	NOC	Noco Drugs Ltd.,24 Sable St.,Toronto 15,Ont.
419.	NOD	Northern Drug Co.,Box 160,Wetaskawin,Alta.
420.	NOP	Northern Stag Industries Ltd.,Box 73,Rockwood,Ont.
421.	NOR	Norwich Pharmacal Co. Ltd.,P.O. Box 790,Paris,Ont.
422.	NOT	Nott Manufacturing Co. Inc.,Pleasant View Rd.,Pleasant Valley,N.Y. 12569, U.S.A.
423.	NOW	Northern Wood Preservers Ltd.,Box 990,Thunder Bay,Ont.
424.	NOX	Noxall Products Ltd.,1820 W. 3rd Ave.,Vancouver 9,B.C.
425.	NOZ	Noxzema Chemical Co. of Canada Ltd.,77 Park Lawn Rd.,Toronto 18,Ont.
426.	NPO	Napco-Protex Inc.,101 rue de la Barre,Boucherville,Que.
427.	NUA	Nulife Pet Remidies Ltd.,1820 West 3rd Ave.Vancouver,B.C.
428.	OLB	Ole Time Woodman's Line,Box 134,Stratham,New Hampshire 03885,U.S.A.
429.	OLC	Olin Corp.,P.O. Box 991,Little Rock,Ark. 72203,U.S.A.
430.	OLD	Olin Corporation,2625 Skeena St.,Vancouver,B.C.
431.	OLH	Oliver Chemical Co. (Lethbridge)Ltd.,249 Strafford Dr.,Lethbridge,Alberta
432.	OLN	Oliver Industries Ltd.,P.O. Box 595,Langley,B.C.
433.	OLS	Oliver Industrial Supply Ltd.,249 Stafford Dr.,Lethbridge,Alta.
434.	OLY	Olympic Stain,A Div. of Comerco Inc.,1148 N.W.Leary Way,Seattle, Washington 98107,U.S.A.
435.	ONE	One Time Package Products Inc.,5 Diamond Ave.,P.O. Box 333,Bethel, Conn. 06801,U.S.A.
436.	ORM	Ormond Veterinary Supply Ltd.,18 Haymarket St.,Hamilton,Ont.
437.	OSD	Osmose Wood Preserving Co. of Canada Ltd.,1080 Pratt Ave.,Montreal 154, Que.
438.	PAA	Pace National Corp.,500 7th Ave. So.,Kirkland,Washington 98033,U.S.A.
439.	PAU	La Compagnie Paula Ltee.,21 St. Paul Est.,Montreal,Que.
440.	PEA	Pearson's Antiseptic Co. of Canada Ltd.,P.O. Box 694,Brockville,Ont.
441.	PEB	Peerless Industrial Chemicals Ltd.,Chemitek Div.,6110 1A St. S.W., Calagary 9,Alta.
442.	PEC	Peinture Nationale Ltee.,1556 St. Vallier Ouest,Quebec 8,Que.
443.	PED	Pennsalt Chemicals of Canada Ltd.,970 Malkin Ave.,Vancouver 3,B.C.
444.	PEI	S.B.Penick and Co.,100 Church St.,New York,New York 10008,U.S.A.

ITEM	CODE	NAME AND ADDRESS
445.	PEK	Pennwalt Corp.P.O. Box 1297,Tacoma,Washington 98401,U.S.A.
446.	PEL	Pennwalt of Canada Ltd.,700 Third Line Rd.,Oakville,Ont.
447.	PEM	Pestroy Co.,877 Boyd Ave.,Ottawa,Ont.
448.	PEN	The Pestroy Co. Ltd.,980 Crevier St.,St. Laurent,Montreal 379,Que.
449.	PEO	Pes-San Products Ltd.,661 Montreal St.,Kingston,Ont.
450.	PEV	John Walter Petrunka,R.R. No. 3,Thunder Bay,Ont.
451.	PFC	Petrofina Canada Ltd.,P.O. Box 3006,Station B,1 Place Ville-Marie, Montreal 113,Que.
452.	PFE	Pfizer Co. Ltd.,50 Place Cremazie,Montreal,Que.
453.	PFF	Pfizer Co. Ltd.,404 N. Front St.,Sarina,Ont.
454.	PHL	Photoxin Sales of Canada Ltd.,1100 Craig St.E.,Montreal,Que.
455.	PHP	Phillips Paint Products Ltd.,306 King St.,Winnipeg 2,Man.
456.	PHT	Phytevrop S.A.,21 Blvd. Malesherbes,Paris Ville,France
457.	PHY	Phillips Yeast Products Ltd.,Park Royal Rd.,London NW 10 7JX
458.	PIC	Pic Corporation,1150 Sylvan St.,Linden,New Jersey 07036,U.S.A.
459.	PIC	Pic Corporation,28-30 Confield St.,Orange,New Jersey 07050,U.S.A.
460.	PIE	Pied Piper Products Ltd.,3129 Kingsway,Vancouver 16,B.C.
461.	PIJ	Pike and Co. Ltd.,10039-101A Ave.,Edmonton,Alta.
462.	PIO	Pioneer Grain Co. Ltd.,2500 Richardson Bldg.,One Lombard Place, Winnipeg 2,Man.
463.	PIT	Pitman Moore Ltd.,15 Green Belt Dr.,Don Mills,Ont.
464.	PLA	Plains Manufacturing Co.,Box 581,Lexington,Nebraska,U.S.A.
465.	PLG	Plant Prod. Co. Ltd.,314 Orenda Rd.,Bramalea,Ont.
466.	POL	Maurice Pollack Ltd.,750 est. boul. Charest,Quebec 2, Que.
467.	POP	Poulin Chemical's Ltd.,247 Marion Place,Winnipeg 6,Man.
468.	PPC	Pet Products Co.,P.O. Box 232,Station E,Hamilton,Ont.
469.	PRE	Pressurized Prod. Ltd.,R.R. No. 1,Belle River,Ont.
470.	PRG	Proctor & Gamble,P.O. Box 355,Terminal A,Toronto 1,Ont.
471.	PRP	Produits Pressure Prod. Div. of Pentagon Chem. Ltd.,170 Boul de l'Industr Candiac,Que.
472.	PRS	Professional Garden Co. Ltd.,1108 6th St. S.E.,Calagary 21,Alta.
473.	PRX	Protex Corp. of Can. Ltd.,6200 de Chateaubriand,Montreal,Que.
474.	PSA	Provincial Pest Control Inc.,292 Decaire Blvd.,St. Laurent,Montreal 376, Que.
475.	PUR	Purex Corporation,44 Clayson Rd. Weston,Ont.
476.	QUE	Quinte Pest Control,85 Stephen St.,Kingston,Ont.
477.	RAL	Ralston Purina Co. Ltd.,404 Main St.,Woodstock,Ont.
478.	RAM	Ramex Pest Control Prod.,S. Hwy. 19,Madison,S. Dakota 57042,U.S.A.
479.	RAW	The W.T.Rawleigh Co. Ltd.,4005 Richelieu St.,Montreal,Que.
480.	REC	Record Chem. Co. Inc.,840 Monte de Liesse Rd.,Montreal,Que.
481.	RED	Redbud Prod. Co. Inc.,P.O. Box 1056,Anderson,Ind, 46015,U.S.A.
482.	REL	Red Line Chem.Ltd.,71 Portland St.,Toronto 18,Ont.
483.	REO	Raindeer Organic Co. Ltd.,5307 Pat Bay Hwy.,Victoria,B.C.

ITEM	CODE	NAME AND ADDRESS
484.	RES	Rentokil Laboratories Ltd.,Felcourt,East Grinstead,Essex,England
485.	REX	The Rexall Drug. Co. Ltd.,2501 Stanfield Rd.,Cooksville,Ont.
486.	RHD	Rhodia Inc.,Chipman Div.,120 Jersey Ave.,P.O. Box 2009,New Brunswick, N.J.,U.S.A.
487.	RIA	Charles Riess & Co.,877 Wall St.,Winnipeg 10,Man.
488.	RIE	Riess Prod. Co.,9302-111th Ave.,Edmonton,Alta.
489.	RIL	Richardson's Extermination Ltd.,202 Laird Dr.,Toronto,Ont.
490.	RIM	Richmond Paint & Chem.Co.,585 No. 3 Rd.,Richmond,B.C.
491.	ROG	Robertson Seeds Ltd.,8118-103rd St.,Edmonton,Alta.
492.	ROH	Rohm & Haas Co. of Can. Ltd.,2 Manse Rd.,West Hill,Ont.
493.	RON	Rockhill Prod. Ltd.,422 Railway St.,Vancouver 4,B.C.
494.	ROO	Rotospray Sysytems Ltd.,464 Dawes Rd.,Toronto 374,Ont.
495.	ROP	Rogar/STB Div. of BTI Prod. Ltd.,P.O. Box 213,805 Castineau St., Douville,St. Hyacinthe,Que.
496.	ROR	Frank T. Ross & Sons (1962) Ltd.,Box 248,West Hill,Ont.
497.	ROS	Ross Daniels Inc.,1720 Fuller Rd.,P.O. Box 430,W. Des Moines,Iowa 50265, U.S.A.
498.	SAA	Safety Vermin Ltd.,504A Kent St.,Ottawa 4,Ont.
499.	SAF	Sanex PC Ltd.,6490 Bombardier,Montreal 38,Que.
500.	SAG	Sanex PC Ltd.,232 Norseman St.,Toronto 18,Ont.
501.	SAJ	Sanitized Process (Can.) Ltd,Ste 1700,2000 Yonge St.,Toronto 299,Ont.
502.	SAK	Sanivore Inc., Box 55,Longueil,Que.
503.	SAL	Salsbury Laboratories Ltd.,209 Manitou Dr.,Kitchener,Ont.
504.	SAM	Produits Sanitaries Laurentide Inc.,C.P. 65,Drummondville,Que.
505.	SAN	Sanfax Ind. Ltd.,1650 S. Service Rd.,Trans Can.Hwy.,Dorval 760,Que.
506.	SAQ	Sanitary Supply & Equipment Co. Ltd.,4275 rue Iberville,Montreal 34,Que.
507.	SAR	Saskatchewan Assoc. of Rural Municipalities,403 McCallum Hill Bldg., Regina,Sask.
508.	SAS	Saskatchewan Dept. of Agric.,Plant Div.,Gov't Administration Bldg., Regina,Sask.
509.	SAW	Saskatchewan Wheat Pool,Alberta & Victoria Sts.,Regina,Sask.
510.	SCL	A.G.Schering,170-172 Muellestrass,Berlin 65 (West) Germany
511.	SCO	Scientific Concentrates Co.,196 Boul. Richelieu,St. Mathias,Que.
512.	SCT	O.M.Scott & Sons,Maryville,Ohio 43030,U.S.A.
513.	SCU	The Scott's Cure Co.,Div. of Garden Research Lab. Ltd.,49 Niagara St., Toronto 135,Ont.
514.	SHA	Shamrock Chem. Ltd.,P.O. Box 321,London,Ont.
515.	SHL	Shell Can. Ltd.,P.O. Box 400,Terminal A,Toronto 1,Ont.
516.	SHW	The Sherwin-Williams Co. of Can. Ltd.,2875 Centre St.,Montreal 104,Que.
517.	SIC	Sico Inc.,3280 Blvd.,Ste. Anne,C.P. 1546,Quebec 5,Que.
518.	SIM	The Robt. Simpson Drug Co. Ltd.,160-176 Yonge St.,Toronto,Ont.
519.	SIO	Simpson-Sears & Simpsons,108 Mutual St.,Toronto 2,Ont.
520.	SIP	Simpson-Sears Ltd.,Canada,4750 Kingsway,Burnaby 1,B.C.
521.	SIR	Dr. N. A. Sirois,Enr.,LaPocatiere,Que.
522.	SMG	Smith Barregar Ltd.,115 West Third Ave.,Vancouver,B.C.
523.	SML	Smith-Douglass,Div. of Borden Chem,Bordon Inc.,P.O. Box G,Colombus, Ohio 43203,U.S.A.
524.	SOJ	Soluja Ltee.,620 Cathcart,Ste. 400,Birks Bldg.,Phillips Sq.,Montreal 111 Que.

ITEM	CODE	NAME AND ADDRESS
525.	SPA	T.M.Spratt Ltd.,33 MacNab St. N. Hamilton, Ont.
526.	STD	Standard Chemical Ltd.,60 Titan Rd.,Toronto 18,Ont.
527.	STF	Stauffer Chemical Co. of Canada Ltd.,1030 W. Georgia St.,Vancouver 5,B.C.
528.	STM	The Standard Manufacturing Co. Ltd.,P.O. Box 6090, St. John's,Nfld.
529.	STO	Stanley Chemicals Ltd.,1645 Edouard Laurin Blvd.,Montreal 9,Que.
530.	STQ	Stanley Home Products of Canada Ltd.,140 St. Ann St.,London,Ont.
531.	STR	Sternco Industries,1125 Talbot St.,St. Thomas,Ont.
532.	STU	C.W.Staples Inc.,Box 328,Presque Isle,Maine,U.S.A.
533.	STY	Star Products Inc.,7955 Boul. St-Michel,Montreal,Que.
534.	SUD	Sudbury Laboratory,Dutton Rd.,Sudbury,Mass.,U.S.A.
535.	SUG	Sumitomo Chemical Co. Ltd.,155-Chome,Kitahama,Higashi-ku,Osaka,Japan
536.	SUM	Summit Chemical Co.,12 East 24th St.,Baltimore,MD.,21218,U.S.A.
537.	SUP	Supersweet Feeds (Div. of Robin Hood Multifood Co. Ltd.,)6600 Cote des Neiges,Montreal,Que.
538.	SUQ	Stim-U-Plant Labs. Inc.,2077 Parkwood Ave.,Columbus,Ohio 43219,U.S.A.
539.	SVC	Sterling Varnish (Canada) Ltd.,P.O. Box 554,St. Catharines,Ont.
540.	SWH	Swish Maintenance Ltd.,309 Lansdowne St. E.,Peterborough,Ont.
541.	SYD	Sydney Pest Control,80 Townsend St.,Sydney,N.S.
542.	TAI	J.S.Tait and Co. Ltd.,838 Powell St.,Vancouver 4,B.C.
543.	TAC	Tam O'Shanter Industries Ltd.,No. 2006,727-6 Ave. S.W.,Calgary,Alta.
544.	TEC	Tech-Chem Services Ltd.,3135 Wharton Way,Mississauga,Ont.
545.	TEI	Texas Refinery Corp. of Canada Ltd.,25 Industrial st.,Toronto 17,Ont.
546.	TEX	Texaco Canada Ltd.,51 Commissioners St.,Toronto,Ont.
547.	THU	Thuron International,A Zoecon-Thuron Co.,12200 Denton Dr.,Dallas, Texas 75234,U.S.A.
548.	TIM	Time-Mist Div. Gemeral Time of Canada,P.O. Box 239,Peterborough,Ont.
549.	TRO	Trojan Chemicals Div. of Valley Camp Ltd.,41 Racine Rd.,Toronto (Rexdale 601) Ont.
550.	TUC	Tuco Products Co.,Div. of the Upjohn Co. of Canada,3 McCarthy St., Orangeville,Ont.
551.	TWI	Twin-Cee Ltd.,P.O. Box 98,20 Armstrong Ave.,Heorgetown,ONt.
552.	UAF	United Farmers of Alberta Co-op Ltd.,119 1st St.,S.E.,Calgary,Alta.
553.	UAJ	Union Carbide Can.Ltd.,123 Eglinton Ave. E.,Toronto 12,Ont.
554.	UBE	Utility Products Co.,4579 Christophe Colombo,Montreal 176,Que.
555.	ULR	Ultra Reserach Industries Ltd.,Box436,Nanaimo,B.C.
556.	UNR	Uniroyal (1966) Ltd.,Chemical Div.,Elmira,Ont.
557.	USB	United States Borax and Chemical Corp.,3075 Willshire Blvd.,Los Angeles, Calif. 90005,U.S.A.

ITEM	CODE	NAME AND ADDRESS
558.	WAK	Watkins Products,Inc.,150 Liberty St.,Winona,Minnesota 55987,U.S.A.
559.	WEA	Weed-Master (Western)Ltd.,415-3rd St. S.W.,Calgary 1,Alts.
560.	WEO	West Agro-Chemical (Canada)Ltd.,325 Dalesford Rd.,Toronto,Ont.
561.	WEP	West Chemical Products Ltd.,5623 Casgrain Ave.,Montreal,Que.
562.	WEQ	Wesco Agencies,1968 West 3rd. Ave.,Vancouver 9,B.C.
563.	WES	E.G.West Co. Ltd.,84 Sheppard Ave.,East Willowdale,Ont.
564.	WHA	Wheat-Belt Industries Ltd.,1334-1-th Ave. S.W.,Calgary,Alta.
565.	WHE	Whitehouse Soaps and Chemicals,P.O. Box 181,Toronto 16,Ont.
566.	WHL	Whitmoyer Products,Rohm and Haas Co. of Canada Ltd.,2 Manse Rd., West Hill, Ont.
567.	WHM	Whitmire Research Labs. Inc.,3568 Tree Court Industrial Blvd.,St. Louis, Missouri,U.S.A.
568.	WIL	Wilson Laboratories Ltd.,Brock and Hatt Sts.,Dundas,Ont.
569.	WIP	Wipp Pest Control Co.,282 Pitt St. E. Windsor,Ont.
570.	WOB	G.H.Wood and Co. Ltd.,Queen Elizabeth Way,P.O. Box 34,Toronto 18,Ont.
571.	WOD	Wood Treating Chemicals Co.,5137 Southwest Ave.,St. Louis,Missouri 63110, U.S.A.
572.	WYN	Wyant and Company Ltd.,739 2nd. Ave. S.W.,Calgary,Alb.
573.	WYT	Wyandotte Chemical of Canada Ltd.,41 Metropolitan Rd.,Scarborough,Ont.

O. Reg. 618/74, Table 2.

Schedule 1

AGENT	REGISTRATION NO.	REGISTRANT	ITEM	PESTICIDE
Schedule 1 Pesticides containing Methyl Bromide				
	299	DOW	1.	Methyl Bromide, Fumigant
	3273	DOW	2.	Dowfume MC - 2 Soil Fumigant contains Methyl Bromide
	4226	INT	3.	Hastings Dawson Fumigant
	4625	INT	4.	Co-op Dawson Fumigant Formula 73
PFF	7299	VUN	5.	Frontier Methyl Bromide Tobacco Plant Bed Fumigant
	8790	PEN	6.	Pestroy Methyl Bromide - Fumigant
	9118	FEJ	7.	Dawson 73 Spot Fumigant
	9169	FEJ	8.	Dawson 37 Space Fumigant
VAR	9564	GRC	9.	Metho-O-Gas, Methyl Bromide Fumigant, 100% Methyl Bromide
VAR	9565	GRC	10.	Brom-O-Gas, Methyl Bromide Fumigant
VAR	9566	GRC	11.	Brom-O-Gas, Methyl Bromide contains 2% Chloropicrin
	11411	SAF	12.	Sanex Methyl Bromide

Schedule 1 Pesticides containing Cyanide Compounds

	652	CYC	13.	Aero HCN Discoids
	959	CYC	14.	Cyanogas - Calcium Cyanide A-Dust and "G" Fumigant
	334	NIM	15.	New Rat-Nip Paste
	544	BPH	16.	DDT 25% Emulsifiable Concentrate
	717	CGC	17.	Tat Ant Trap contains Thallium Sulphate
	750	NOX	18.	Noxall Rat Bait Contains Red Squill
	859	PRX	19.	Protex Insect Powder
	1017	RIA	20.	Riess Cockroach Exterminator contains Sodium Fluoride
	1027	PSA	21.	"Reel Roach Powder", contains Sodium Fluoride
	2170	POP	22.	Poulin's Cockroach Doom
	2283	GCP	23.	Green Cross Weed-No-More
	2521	DUQ	24.	Du Pont Ceresan M Mercurial Seed Disinfectant
	2573	GCP	25.	Green Cross Toxaphene 60% Emulsifiable Concentrate
	2586	BRG	26.	Fairview Weed Cop Mixed Butyl Ester E-64, 2,4-D
	2607	CHP	27.	Chipman 2,4-D Ester 64 Liquid Weed Killer
AMI	2663	AMC	28.	Amchem Weedust 5% - 2,4-D Ester Weed Killer
	2755	LAT	29.	Later's Calmite T.E.P.P. Insect Spray
	3294	MAP	30.	Cal-clor Improved Mercurial Turf Fungicide
	3322	SHL	31.	2,4-D Liquid Weedkiller Ester 64
	3380	SAA	32.	"Triplex" Insect Powder
	3433	ALS	33.	No-Weed 2,4-D 5% Dust Weed Killer
	3624	GCP	34.	Green Cross Moth Blaster
	3678	INT	35.	Co-op 2,4-D Ester 64 Liquid Weed Killer
	3680	INT	36.	Co-op 2,4-D Ester Dust
	3812	ALS	37.	No-Weed 2,4-D Ester 64 Weed Killer
	4144	ABE	38.	Fly Master Lindane Insecticide for Vaporization
	4325	WHE	39.	CIines Roach Powder
	4382	NIB	40.	Niagara 2,4-D Lo Estasol Weed Killer
	4383	CHP	41.	Methoxone Ester 80, MCPA Liquid Weed Killer
	4385	SHL	42.	Dieldrin 20 Emulsifiable Concentrate Insecticide
	4449	LAT	43.	Later's 2½% Aldrin Dust Insecticide
	4552	ELI	44.	Ike - Lindane Tablets and Crystals for Fumigation
	4677	NAP	45.	Panogen 15 Liquid Seed Treatment
	4728	CHP	46.	Chipman 2,4-D Ester 128 Double Strength Liquid
	4731	MBE	47.	Marquette Marcodane Insecticide
	4734	NIB	48.	Niagara 2,4-D Estasol 128 Weed Killer
	4738	NAL	49.	National High Concentrate 128 oz. 2,4-D Ester
	4766	SHL	50.	Shell Aldrin 5% Granular Insecticide
	4780	PIO	51.	Pioneer Liquid Weed Killer 2,4-D Ester 128
	4785	NAA	52.	Era Lindane Tablets and Crystals for Fumigation
	4793	RAL	53.	Purina Liquid Stock Spray
	4823	DOW	54.	Esteron 64 Farm Weed Killer Liquid
	4845	UBE	55.	Electro-Vap Lindane Insecticide for Fumigation
	4846	CHP	56.	Chipman 20% Aldrin Granular Soil Insecticide
	4923	SIR	57.	Nadane Insecticide
	4929	SHL	58.	Shell Endrin 20 Emulsible Concentrate Insecticide

	4941	LAT	59.	Later's Heptachlor 20 E.C. Insecticide
	4971	CAA	60.	Sta-Out Tablettes et Cristaux Lindane Pour Fumigation
	4973	GHI	61.	Comprimes Lindane G.H.
	5072	BUG	62.	Buggo Insecticide Crystals Lindane 98% for Fumigation
	5073	NIB	63.	Sodium Arsenite Liquid Potato Vine Killer
	5193	ALS	64.	ACS "AM" Dual Purpose Seed Treatment
	5384	SHL	65.	Shell Aldrin 20% Granular Insecticide
	5428	CHP	66.	Chipman 1% Endrin Dust Insecticide
	5462	INT	67.	Co-op MCPA Ester 80 Liquid Weed Killer
	5504	GCP	68.	Green Cross Ester Weed Liquid Killer
	5527	PAU	69.	Paula Lindane Tablets for Fumigation
	5875	FAP	70.	Bombe Antimite Mothproofer
	5933	JIT	71.	Jito Mothkiller Bombe tue mites
	5944	GCP	72.	GreenCross MCPA Ester 80 Weed Killer
	5979	NAL	73.	National MCPA Ester Weed Killer
	6030	NIB	74.	Endrin 2 Emulsifiable Concentrate Insecticide
	6038	CHP	75.	Chipman Endrin 20 Emulsifiable Concentrate Insecticide
	6045	ALS	76.	No-Weed MCPA Ester 80 Weedkiller
	6051	NAP	77.	Pano-Drench Soil Drench for Greenhouses
	6070	HOL	78.	Holcomb Insekil Aerosol Insecticide
	6113	DUQ	79.	Du Pont Semesan Turf Fungicide
	6118	CHP	80.	Chipman Brushkiller 128 Regular
	6132	BRG	81.	Fairview Weed Cop "One Twenty Eight"
	6160	ALS	82.	No-Weed MCPA 5% Ester Dust Weed Killer
	6179	GCP	83.	Green Cross 20% Endrin Emulsifiable Concentrate
	6181	OSD	84.	Osmose Special Fence Post Mixture
	6187	PFF	85.	Calsa Endrin 20 Emulsifiable Concentrate Insecticide
	6190	ALS	86.	No-Weed 2,4-D Ester 128 Liquid Weed Killer
	6254	INT	87.	Co-op MCPA Ester Dust 5%
	6261	CHP	88.	Chipman Topkiller 160 contains Sodium Arsenite
	6314	DOW	89.	Formula 8 Farm Weed Killer Liquid
	6424	REL	90.	Aero-Fog Aerosol Concentrate Insecticide C 222
	6466	SHL	91.	Shell Aldrin 40 Emulsible Concentrate Insecticide
WAL	6510	WAK	92.	Watkins Mothproofer Pressurized Spray
	6521	NAP	93.	Drinox H-34B Liquid Seed Insecticide
	6597	MBE	94.	Marquette Red Squill - Exterminateur des Mulots
	6602	PFF	95.	Calsa Brush Killer 128
	6613	NOX	96.	Noxall Ant Trap contains Thallium
	6660	SHL	97.	2,4-D Liquid Weedkiller Ester 80
	6662	SHL	98.	Shell 2,4-D Weed Killer Ester 128
	6663	MCC	99.	Lice Tox Livestock Insecticide
	6666	LOR	100.	Lindane 99 Lorrain Insecticide
	6680	INT	101.	Co-op 2,4-D Ester 128 Liquid Weedkiller
CRD	6683	BOD	102.	Red Shield Double Protection Seed Treatment
	6705	SAR	103.	Sarm 2,4-D Ester 128 Weedkiller
	6750	CHP	104.	Agrosol Liquid Mercury Seed Treatment
	6756	HEF	105.	Hercules Lindane Tablets for Fumigation
	6771	SHL	106.	Shell MCPA Weedkiller Ester 80
	6896	WEQ	107.	Chloropicrin Soil Fumigant
	6923	FRD	108.	Toxaphene-Lindane Spray Concentrate
	6963	STD	109.	Stan-Chem 2,4-D Ester 80 Weed Killer
	6965	STD	110.	Stan-Chem MCPA Ester 80 Weed Killer
	6971	STD	111.	Stan-Chem 2,4-D Ester 128 Weed Killer
	7002	MBE	112.	Marquette Top Killer 10
	7004	MBE	113.	Marquette Aldrin 5% Insecticide Dust
	7005	JIT	114.	Jito Gas Aerosol Insecticide
	7007	FAP	115.	Familex Insecticide Fly Gas Bomb
	7010	STD	116.	Stan-Chem 2,4,5-T Ester Brush Killer
	7012	STD	117.	Stan-Chem D+T L.V. Ester Brush Killer
	7039	PFF	118.	Calsa Weed Bane Ester 48 2,4-D Weed Killer
	7049	CHP	119.	Chipman Heptachlor 20 Emulsifiable Concentrate

	7104	FLR	120.	Flodane Insectiside
	7208	NAP	121.	Pandrinox Liquid Combination Fungicide-Insecticide
	7214	NIB	122.	Zinc Phosphide Powder Rodenticide
	7221	DOW	123.	Picfume Dow Chloropicrin - Soil & Space Fumigant
	7265	CHP	124.	Chipman Liquid Wireworm Seed Treatment
	7284	CHP	125.	Mergamma Liquid Dual Purpose Seed Treatment
	7289	NIB	126.	Niagara Heptadrin Liquid Wireworm Killer
	7328	MBE	127.	Marquette 20% Endrin Emulsion Concentree Insecticide
	7330	MBE	128.	Aldrin 20% Emulsion Concentrate Insecticide
AMI	7338	AMC	129.	Weedone 128 2,4-D Ester Weed Killer Emulsifiable Conc.
	7387	REC	130.	Wool-Guard Moth Proof (Insecticide)
	7390	INT	131.	Co-op Toxaphene 60% E.C.
	7423	STD	132.	Stan-Chem 2,4-D Ester 64 Weed Killer
	7425	STD	133.	Stan-Chem D&T L.V. Ester Brush Killer
	7440	MBE	134.	Marquette Endrin 1% Copper 7% Insecticide-Fungicide
	7447	MBE	135.	Marquette Aldrin Granular 5% Insecticide
	7460	SHL	136.	Shell Endrin 75% Wettable Powder Insecticide
	7465	MBE	137.	Marquette Endrin 1-Zineb 3.9 Dust Insecticide-Fungicide
	7467	MBE	138.	Marquette 1% Endrin Dust Insecticide
	7473	NIB	139.	MCP 80 Ester Liquid Herbicide contains MCPA Ester
	7571	ALS	140.	No-Weed 80 2,4-D Ester Weed Killer
	7577	NAP	141.	Panogen Turf Fungicide
	7597	LAT	142.	Later's Aldrin 400 E.C. Insecticide
	7619	PED	143.	Penite - 8 Sodium Arsenite Herbicide Solution
	7621	PFF	144.	Calsa Aldrin 40 Emulsifiable Concentrate-Insecticide
	7646	CHP	145.	Chipman Copper-Endrin Dust Fungicide-Insecticide
	7711	GCP	146.	Non-Mercurial Liquid Dual Purpose Bunt-No-More
	7758	NAP	147.	Morsodren Liquid containing Mercury
	7808	ALT	148.	Al-Si-Co Moth Proofer
	7811	DOW	149.	MCPA Ester 80 Liquid Farm Weedkiller
	7818	MAZ	150.	Marcotox for Fumigating only containing Lindane
AMI	7825	AMC	151.	Weedone MCPA Ester
	7830	NAA	152.	Era Tracking Powder for Rats and Mice
	7889	CHP	153.	Chipman Backrubber Concentrate Insecticide
	8007	SAS	154.	Endrin Emulsifiable Concentrate
	8034	NAP	155.	Pentadrin Non-Mercurial Seed Treatment
	8115	PFF	156.	Calsa Heptachlor 30 Emulsifiable Concentrate Insecticide
	8176	DUQ	157.	Du Pont Tersan OM Turf Fungicide
	8217	OLH	158.	Ochemo Liquid 2,4-D Weed Killer 80
	8218	NAA	159.	Era Cockroach Powder
	8315	CHP	160.	Chipman 2,4-D Ester 80 Liquid Weedkiller
	8323	DOW	161.	Formula 8 Unemulsified Weed Killer Solution
	8411	GCP	162.	Green Cross Potato Top Killer
	8420	CBL	163.	Cardel Beef-Aid
	8432	PFF	164.	Calsa 128 Sodium Arsenite Solution
	8444	MET	165.	Metasol MMH Liquid Mercury Seed Treatment
	8448	NAP	166.	Panodrin 15B Liquid Seed Treatment Fungicide
AMI	8496	AMW	167.	AMWAY Cedersol Moth Proofer Spray
	8497	UAF	168.	Summit 2,4-D Ester 64 Emulsifiable Weed Killer
	8499	UAF	169.	Summit 2,4-D Ester 80 Emulsifiable Weed Killer
	8501	UAF	170.	"Summit" 128 oz. 2,4-D Mixed Butyl Ester Weed Killer
	8503	UAF	171.	"Summit" MCPA Mixed Butyl Ester 80 oz. Weed Killer
	8527	PFF	172.	Calsa Ester 128, The Fast Sure 2,4-D Weed Killer Liquid
	8530	ALS	173.	ACS Liquid Mercury Seed Treatment
	8673	NAC	174.	National Chemsearch Deep Kill Weed Killer
	8783	FEC	175.	Lin-Tab Refills, Lindane for Use in Vapo-Swat Vaporizer
	8796	CHP	176.	Agrosol Low Temperature Liquid Mercury Seed Treatment
	8854	BEP	177.	Shield Pressurized Cedarized Mothproofer
LEY	8934	AAG	178.	AAhepton Liquid Wireworm Insecticide Heptachlor
	8942	SAM	179.	Laurentide Cedar Moth Proofer (Pressurized)

	9031	INT	180.	Co-op 2,4-D Ester 80 Liquid Weed Killer
	9049	LAT	181.	Later's Weed & Pave
	9128	INT	182.	Co-op MMH Liquid Mercury Seed Treatment
	9201	NAP	183.	Panogen PX Seed Treatment Fungicide
	9205	GCP	184.	Green Cross Drill Box Dual Purpose Bun-No-More Powder
	9209	CHP	185.	Agrox DB Mercurial Seed Treatment Powder
	9219	CHP	186.	Mergama DB Dual Purpose Seed Treatment Powder
	9255	MBE	187.	Marquette 40% Aldrin Insecticide Emulsion Concentrate
	9262	OLH	188.	Ochemco Weed Killer 128
	9289	NAP	189.	Drinox PX Seed Treatment Insecticide Powder
	9325	NAP	190.	Pandrinox PX Seed Treatment Fungicide Insecticide
	9375	MET	191.	Metasol MMH Liquid Dual Purpose Seed Treatment
	9389	MON	192.	M.P. Roach Powder
	9420	MET	193.	Metasol - MF Liquid Mercury Seed Dressing
	9424	NAP	194.	Pandrinox A - Liquid Seed Treatment
	9432	NAP	195.	Pentadrin PX Dry Fungicide-Insecticide
	9456	MET	196.	Metasol - MMH Dual Purpose Drill Box Formulation
	9458	MET	197.	Metasol - MMH Mercury Drill Box Formulation
	9472	NAP	198.	Pandrinox A-PX Dry Seed Treatment
	9480	NAP	199.	Pentadrin A Non-Mercurial Seed Treatment
	9489	NAP	200.	Pentadrin APX Dry Non-Mercurial Seed Treatment
	9515	PIO	201.	Pioneer Liquid Weed Killer 2,4-D Ester 80
	9548	PFF	202.	Pfizer MCPA Ester 80 Liquid Weed Killer
	9550	PFF	203.	Pfizer 2,4-D Ester Liquid Weedkiller Concentrate 128
	9576	MET	204.	Met-Cal Turf Fungicide Powder
	9617	MEX	205.	Meteor Cedarized Moth Bomb Pressurized Spray
	9624	MON	206.	M.P. Lindane Tablets - for Fumigation
	9672	ATL	207.	Poudre Insecticide au Fluorure De Sodium
	9692	LAT	208.	Later's 5% Aldrin Dust (for Granular) Insecticide
	9729	LAT	209.	Later's Chloropicrin Liquid Soil Fumigant
	9744	INT	210.	Co-op Mercury D.b. Seed Treatment Dust
	9775	BRI	211.	Bramco Top Killer Sodium Arsenite Solution
	9776	VAR	212.	Guardsman Penite 8 Sodium Arsenite Solution
	9778	DOW	213.	128 Brush Killer 2DM-TTM Emulsifiable Concentrate
	9789	DOW	214.	128 UE Brushkiller DM-TM Solution
	9790	DOW	215.	128 UE Brush Killer 2DM-TTM Solution
	9791	DOW	216.	128 Brush Killer DO-TM Emulsifiable Concentrate
	9825	CFR	217.	AS-90 Weed Killer Solution
	9862	MIB	218.	MCP 96 Ester Liquid Herbicide
ILI	9904	BAD	219.	Sodium Arsenite No. 8
LEI	9912	BAD	220.	Endrin Emulsifiable Liquid Insecticide
	9952	PFF	221.	Pfizer Backrubber Concentrate
	9954	ACO	222.	Ant-Ex Powder Kills Ants
	9969	SAF	223.	Sun-X Insect Powder
	9991	NAP	224.	Drinox A-34B Liquid Seed Treatment Insecticide
	9998	BIP	225.	Bee-Nip Jet Hornet Bomb
10035		NIB	226.	Dual-Purpose Seed Protectant
10044		COO	227.	Cooper Cooper-Tox Livestock Spray & Dip
10049		COO	228.	Cooper Cooper-Tox Extra or Cooper Hog Mange Cure
10056		COO	229.	Cooper Back Rubber Concentrate contains Toxaphene
10067		IMP	230.	Esso MCPA Ester-80 Liquid Weedkiller
10070		IMP	231.	Esso 2,4-D Ester-128 Liquid Weedkiller
10111		VEL	232.	Velsicol - Colatox Herbicide
10187		OLH	233.	Ochemco MCPA Liquid Weed Killer Ester 80
10189		ALS	234.	ACS 2,4-D Ester 144 Emulsifiable Weed Killer
10237		NIB	235.	Brush Killer 2:1 128 Liquid Herbicide
10242		LAT	236.	Later's Liquid Potato Top & Vegetation Killer

	10274	NAC	237.	National Chemsearch Brand Weed Killer Solution
[illegible]	10291	STC	238.	Double Strength Vine Killer No. 6
	10411	CLR	239.	Com-Kill Weed Killer
MCM	10444	CMR	240.	Formula F-20 Residual Insecticide Solution
	10459	INT	241.	Co-op Aerial Spray 2,4-D Ester 128 oz. Liquid Weed Killer
	10469	NIB	242.	Meco-MCPA 64 Herbicide
	10519	DEF	243.	De-Fly-Er Lindane Chemical Refill for Vaporizer Use
	10614	LAT	244.	Later's 5% Aldrin Granular Insecticide
	10630	DIT	245.	DDT 5% Pink Tracking Powder Rodenticide
	10642	NIB	246.	DDT 2.5 E Soil Insecticide Emulsifiable Concentrate
	10646	NIB	247.	DDT 50 WP Insecticide
	10656	INT	248.	Co-op DDT 50% W.P. Insecticide
	10664	FED	249.	Federal Dual-Purpose Seed Protectant
	10668	CHP	250.	Chipman DDT 25 Emulsifiable Concentrate Insecticide
	10669	CHP	251.	Chipman 50% DDT Wettable Powder Insecticide
	10670	CHP	252.	Chipman 75% DDT Wettable Powder Insecticide
	10686	DIT	253.	DDT 50D Dust Concentrate Insecticide
	10696	SAF	254.	Sanex Chloropicrin
	10703	MBE	255.	Marquette Guepex Insecticide Pressurise
	10720	PFF	256.	Calsa DDT 50% Wettable Powder Insecticide
	10721	PFF	257.	Calsa S-75 Micro-Particle 75% DDT Wettable Spray Powder
	10722	PFF	258.	Calsa 2.5 DDT Emulsifiable Concentrate Insecticide
	10735	STF	259.	DDT 5 Flowable Insecticide
	10766	GCP	260.	Green Cross 25% DDT Emulsion
	10767	GCP	261.	DDT 2.5E Liquid Insecticide Concentrate
	10768	GCP	262.	50% DDT Wettable Powder
	10772	LAT	263.	Later's 50% DDT Wettable Powder Insecticide
	10773	LAT	264.	Later's 5% DDT Dust Insecticide
	10774	LAT	265.	Later's 25% DDT E.C. Insecticide
	10775	SHL	266.	DDT 25 Emulsible Concentrate Insecticide
	10823	NIB	267.	DDT 5 Dust Insecticide
	10934	MCE	268.	Montclair Tuscet Roach Powder
[illegible]	10948	MAG	269.	Magnacide H (Inhibited Acrolein Herbicide)
	11047	FFP	270.	FFC Roach Powder
	11118	GCP	271.	Green Cross Toxaphene 60% Emulsifiable Concentrate
[illegible]	11137	SUC	272.	Sumithion Technical
[illegible]	11138	SUC	273.	Sumithion 100 E.C.
	11310	NIB	274.	Atesin-M Liquid Herbicide contains Monolinuron and EPTA
	11367	[illegible]	275.	Co-op Esteron 99 C Concentrate Emulsifiable Farm Weed Killer
	11435	CLA	276.	2,4-D Ester 80 Liquid Weed Killer
	11436	NIB	277.	Brushkiller 3:1

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Schedule 2

AGENT	REGISTRATION NO.	REGISTRANT	ITEM	PESTICIDE
	1[illegible]	GCP	1.	Green Cross Arsenate of Lead Insecticide
	47	CGC	2.	Black Leaf 40 Nicotine Sulphate Solution
	58	NIB	3.	Lead Arsenate Insecticide
	109	BRG	4.	Fairview Gopher-Cop
	291	GAC	5.	Richards Gopher Poison contains Strychnine
	358	CHP	6.	Chipman Lead Arsenate Insecticide
	511	CHP	7.	Chipman Nicotine Sulphate 40 Contact Insecticide
	515	SAR	8.	Sarm Gopher Poison contains Strychnine
	632	CAM	9.	"Lightning" Gopher Poison (contains Strychnine)
	659	MBE	10.	Insectin Arseniate de Calcium
	786	NOD	11.	Northern Gopher Poison (contains Strychnine)
	835	ELL	12.	Sodium Chlorate
	921	NIB	13.	Elgetol Liquid Insecticide-Fungicide (contains DNOC)
	1082	BAT	14.	Bartlett Arseniate of Lead
	1083	MBE	15.	Rapid Bug Killer
	1316	DUQ	16.	Du Pont Tersan 75 Thiram Turf Fungicide
	1344	PIE	17.	Pied Piper Roachocide
	1664	ROH	18.	Dithane D-14 Agricultural Fungicide (contains Nabam)
	1685	GCP	19.	Green Cross Bug Killer (2% Arsenic Dust)
	1707	GCP	20.	Green Cross Basi-Cop Fungicide (Copper Oxychloride)
NOF	1778	MIF	21.	Midland Gas-O-Cide Gas Fumigant
	2291	CHP	22.	TRI-COP Wettable Powder Copper Fungicide
	2324	DOW	23.	Dowfume EB - 15 Inhibited Soil Fumigant
	2425	SHL	24.	D-D Soil Fumigant
	2707	DOW	25.	Dowfume EB-5 Grain Fumigant
	2985	CHP	26.	Fenesan 50% Lindane Wettable Powder Insecticide
	3116	GCP	27.	Green Cross Low Volatile 2,4,5-T Ester "64"
	3132	DOW	28.	Dow General Liquid Dinoseb Herbicide
	3159	GCP	29.	Green Cross P.M.A.S. Turf Fungicide
	3162	GCP	30.	Green Cross Chlordane 8 E.C. Insecticide
	3165	STF	31.	Neutro Cop 53 Basic Copper Fungicide
	3220	LAT	32.	Later's Copper Spray - Tribasic Cooper Sulphate
	3267	CHD	33.	Penta Preservative Concentrate 1-10
	3328	NIB	34.	Lindane 25 WP Insecticide
	3331	SHL	35.	2,4-D + 2,4,5-T Liquid Brushkiller
	3367	DOW	36.	Dowfume W-85 Soil Fumigant containing Ethylene Dibromide
AMI	3430	AMC	37.	Weedone LV-4 2,4-D Ester Weed Killer Liquid
	3489	GCP	38.	Green Cross 25% Lindane Wettable Powder
	3501	CLA	39.	PMAS - 10% (Liquid) Phenyl Mercuric Acetate
VIR	3528	VIT	40.	Lethalaire G-57 Aerosol Insecticide
	3562	GCP	41.	Green Cross Bunt-No-More Powder
	3734	PFF	42.	Calsa 25% Lindane Wettable Powder Insecticide
	3749	LAT	43.	Later's 2,4-D Ester Low Volatile Weedkiller
	3771	CLA	44.	PMAS - 10% (Liquid) Phenyl Mercury Acetate
	3843	DOW	45.	Dowfume V Vault Fumigant
AMI	4870	AMC	46.	Weedone Emulsifiable Concentrate

	3926	GCP	47.	Green Cross Brad Eradicant Fungicide
	3939	GOC	48.	A - K Moss Kill
	3942	STF	49.	BHC 12-W Agricultural Insecticide
	3959	CHP	50.	Chipman Brushkiller 76 Low Volatile Iso-octyl Esters
	3961	CHP	51.	Chipman 2,4,5-T 76 Low Volatile, Weed and Brushkiller
	4019	STF	52.	Chlordane 9.6E Emulsifiable Liquid Insecticide
	4042	SHL	53.	2,4,5-T Liquid Brushkiller L.V. 76.8
	4044	SHL	54.	2,4-D + 2,4,5-T Liquid Brushkiller L.V. 76.8
	4097	MFT	55.	Metasol Apple Spray, Organic Mercury Fungicide
	4167	DOW	56.	Dow Preemerge Liquid Weed Killer containing Dinoseb
	4293	NIB	57.	Niagara 2,4,5-T Brushkiller Weed Killer
	4295	NIB	58.	Niagara Commercial Brush Killer Weed Killer
	4334	RAL	59.	Purina Insect Oil Concentrate
	4363	GCI	60.	Green Cross Liquid Thiogreen Fungicide (Nabam 22%)
	4369	GCI	61.	Green Cross Low Volatile Brushkil 64
	4429	PLG	62.	Plant Products Lindane 25 Wettable Powder Insecticide
	4486	NIB	63.	Sinox PE Water Soluble Dinitro Weed Killer
	4535	NIB	64.	Sinox General A Contact Weed Killer
	4584	TUC	65.	Bin Treat contains Lindane
	4641	INT	66.	Co-op Bulk Fumigant
	4763	GCP	67.	Green Cross Low Volatile Weed-No-More
	4771	NAL	68.	National Ten Ten 2,4-D Liquid Weed Killer
	4887	STF	69.	Cythion 9.6 E Premium Grade Malathion
	4949	ALS	70.	No-Weed 2,4-D Ester 64 Low Volatile Weed Killer
	4980	CHP	71.	Chipman 2,4-D Ester 80 Low Volatile Liquid Weedkiller
	4982	LAT	72.	Later's Chlordane 800 E.C.
	4983	ALS	73.	No-Weed 2,4-D & 2,4,5-T Low Volatile Ester Brushkiller
MCH	5042	HAL	74.	Tri-X Brand Fumigant
	5068	MAP	75.	Cadminate Turf Fungicide Wettable Powder
	5104	CHP	76.	Chipman Thiram SF-75 Seed Treatment
BAU	5192	GAI	77.	"Arnold" Lindane Spray
	5220	FID	78.	Franklin 20% Lindane
	5232	LED	79.	Leitte Spotfume 50 Kills Cereal Infesting Insects
	5237	NBI	80.	Mar-Cop 52 Fungicide
	5242	INT	81.	Co-op L.V. 2,4-D Ester 64 Liquid Weed Killer
	5321	DOW	82.	Kuron Weed and Brush Killer Emulsifiable Concentrate
	5324	BRH	83.	Bramco "Brush-Kil" Low Volatile 64
	5438	PFF	84.	Calsa 2,4-D Low Volatile Ester 96 Liquid Herbicide
	5475	ROH	85.	Karathane WD Agricultural Fungicide and Miticide
	5477	CIA	86.	Spotrete Thiram Turf Fungicide Powder
	5511	GCP	87.	Green Cross Low Volatile 2,4-D Ester 96 Weedkiller
MCC	5556	ALR	88.	Blitz 10 PMA Herbicide-Fungicide
	5614	BRH	89.	Weed-Bane Ester 80 2,4-D Liquid
	5741	LAT	90.	Later's Nicotine Sulphate 40 Insecticide
	5746	VAR	91.	Guardsman Sodium Soluble Powder
	5841	DUQ	92.	Du Pont Arasan 75 Thiram Seed Protectant
	6000	SHL	93.	2,4,5-T Liquid Brushkiller L.V. 112
	6002	SHL	94.	2,4,-D + 2,4,5-T Liquid Brushkiller L.V. 112
	6004	SHL	95.	Shell 2,4-D Weed Killer Ester L.V. 112
	6007	STF	96.	Captan 75 Seed Treater for Seed Disease Control
	6120	CHP	97.	Chipman Nabam Liquid Fungicide
	6140	NIB	98.	Niagara 2,4-D Estesol L.V. 96 Weedkiller

	6241	MAP	99.	Kromad Broad-Spectrum Turf Fungicide
	6245	TUC	100.	Acti-dione 5% Fungicide Powder
	6320	MOL	101.	Randox Emulsifiable Concentrate
	6330	DOW	102.	Esteron 99 Concentrate Liquid Farm Weed Killer
FRM	6334	COO	103.	Fungidex Wettable Powder Fungicide
	6353	STF	104.	Acritet 34-66 Fumigant
	6369	NIB	105.	Niagara Nabam Liquid Fungicide
	6374	ROH	106.	Kelthane E.C. Agricultural Miticide
	6420	CYC	107.	Liquid Cyanamid, A General Contact Weed Killer
	6432	DOW	108.	Telone Liquid Soil Fumigant
MCG	6522	ALR	109.	"Thiram 75" Fungicide for Golf and Lawn Turfs
	6526	ALS	110.	No-Weed Low Volatile 2,4-D Ester 80
	6528	SAF	111	65.5 Chlordane Emulsifiable Concentrate Insecticide
	6580	KEM	112.	Kem-Grain Fumigant
	6582	KEM	113.	Kem-Sure-Kill Machinery Fumigant
	6589	TUC	114.	Phosbait Mouse Bait contains Zinc Phosphide
	6629	TUC	115.	Building Insect Oil Concentrate
	6632	STF	116.	Trithion 25-WP Insecticide - Acaricide
	6654	STF	117.	Trithion 4 Flowable Insecticide - Acaricide
	6698	INT	118.	Co-op L.V. Brush Killer Liquid Weed Killer
	6718	NIB	119.	Niagara 2:1 Liquid Brush and Weed Killer
	6720	NIB	120.	Premium Brush and Weed Killer
	6726	BAT	121.	Bartlett Fixed Copper Fungicide Spray Powder
	6747	NBY	122.	Embutox E 2,4-DB Butyl Ester
	6753	DUQ	123.	Du Pont Thylate Thiram Fungicide
	6766	BRH	124.	Bramco Malathion Insecticide 1000
	6829	GCP	125.	Green Cross Low Volatile Brushkil "96"
	6853	GCP	126.	Green Cross Soil Kare (Mylone) Granular Fumigant
CHI	6857	CHG	127.	Co-Ral 25% Wettable Powder Animal Insecticide
	6935	TUC	128.	Acti-dione RZ Antibiotic Turf Fungicide
	6950	LAT	129.	Later's Pentachlorophenol Wood Preservative
	6961	STD	130.	Stan-Chem 2,4-D LV Ester 80
	6987	FIS	131	Fison's Primatol S Brand of Simazine 50W
GUS	6993	CUT	132.	K.R.S. for Horses Kills Screw Worms and Maggots
GRE	7015	FUL	133.	Fulex Nicotine Fumigator
	7021	SAR	134.	Sarm Lo-Volatile Ester 2,4-D Weedkiller
	7024	WEA	135.	Weedex Wonder Stik 2,4-D Weedkiller
	7036	DUQ	136.	Du Pont Karmex Diuron Weed Killer
	7038	DUQ	137.	Du Pont Telvar Monuron Weed Killer
	7040	DUQ	138.	Du Pont Dybar Fenuron Weed and Brush Killer
	7042	DUQ	139.	Du Pont Kloben Neburon Weed Killer
	7044	DUQ	140.	Du Pont Trysben 200 General Weed Killer
	7106	NIB	141.	Nicotine Sulphate Insecticide
	7112	MOL	142.	Randow Granular Selective Herbicide
	7126	CIA	143.	Thimer Wettable Powder Turf Fungicide
	7132	SHL	144.	2,4-D Liquid Weedkiller Ester L.V. 80
	7154	DOW	145.	Dowfume EB-59 Spot Fumigant
	7175	CHP	146.	Thiodan 2 Emulsifiable Concentrate Insecticide

	7190	TUC	147.	Bin Fume Grain Fumigant
	7210	STF	148.	Penta 10-1 Concentrate Wood Preservative Solution
	7224	PLG	149.	Nicotine Pressure Fumigators
	7227	DOW	150.	Vertifume Grain Fumigant Solution
	7239	MBY	151.	Mersil Turf Fungicide
CHH	7341	CHG	152.	Guthion 3% Dust Crop Insecticide
	7351	MOL	153.	Avadex (diallate) Selective Herbicide Wild Oat Killer
	7379	PLG	154.	Concentrate Liquid Plant Chickweed Killer
	7394	PFF	155.	Calsa 2,4,5-T 96 L.V. Liquid Brushkiller
CHH	7398	CHG	156.	Dexon 70% Wettable Powder Seed Fungicide
	7404	MBE	157.	Herbe a la Puce et Herbicide 64 L.V.
	7410	FIS	158.	Fison's Diazinon 25E (Agricultural) Insecticide
	7417	MBF	159.	Arseniate de Plomb "Marquette" Insecticide
	7428	NIB	160.	Thiodan 50 WP Insecticide contains Endosulfan
	7442	CHV	162.	Ortho Dibrom Insecticide Emulsifiable Concentrate
AMI	7508	AMC	163.	L.V.-80, 2,4-D Ester Weed Killer Emulsifiable Concentrate
	7523	BRD	164.	Bradford Liquid Cyanamid, General Contact Weed Killer
	7525	INT	165.	Co-op L.V. 2,4-D Ester 112 Liquid Weed Killer
	7527	INT	166.	Co-op L.V. Brush Killer 112 (2,4-D and 2,4,5-T)
	7580	ALS	167.	Penta-Chem Concentrate Pentachlorophenol
	7599	CHT	168.	Gammasan Drill Box Seed Treatment Powder
	7658	LAT	169.	Later's Clover and Chickweed Killer
	7660	BRD	170.	Bramco Brush-Kil Low Volatile 96 oz. (50/50 mix)
	7682	NIB	171.	Waxed Mouse Bait 2 contains Zinc Phosphide
	7701	NAF	172.	Vorlex Liquid Soil Fumigant
DIA	7737	DIB	173.	Crop River, 2,4-D Terra Granular Herbicide
	7803	DOW	174.	Vidden D a Soil Fumigant Solution
	7817	PED	175.	Penco Aquatic Weed Killer Liquid
	7848	NIE	176.	Niagara Ethion 25 Wettable Powder Insecticide
	7852	STF	177.	Trithion 10 Granular Organic Phosphate Soil Insecticide
CHH	7882	CHG	178.	Meta-Systox-R Spray Concentrate Systemic Insecticide
CHH	7884	CHG	179.	Di-Syston Granular Systemic Insecticide
	7899	CHP	180.	Chipman 2,4-D Butyric 64, Selective Weedkiller
CHH	7932	CHC	181.	Bay 29493 Spray Concentrate Ornamental Insecticide
CHH	7934	CHC	182.	Bay 29493 Wettable Powder Ornamental Insecticide
	7962	ROH	183.	Dithane A-40 Agricultural Fungicide
	7967	DOW	184.	Fumazone 70E - Soil Fumigant
	8002	TUC	185.	Acti-Dione Thiram Turf Fungicide
	8021	CYC	186.	Cythion Liquid Grain Protectant
	8022	LAT	187.	Later's Calcide Vegetation Killer
	8024	BAT	188.	Bartlett Mouse Bait
	8043	DOW	189.	Ruelene 25 E Pour
CHH	8056	CHG	190.	Co-Ral 5.0% Dust Poultry Insecticide
	8072	GCP	191.	Green Cross Lindasan Combination Seed Treatment
CHH	8080	CHC	192.	Baytex 25% Wettable Powder Insecticide
CHH	8082	CHG	193.	Baytex Spray Concentrate Insecticide
CHH	8084	CHG	194.	Baytex Spray Concentrate Barn Insecticide
CHH	8086	CHG	195.	Entex Spray Concentrate PCO Insecticide
CHH	8090	CHG	196.	Entex Oil Soluble Concentrate PCO Insecticide
	8095	PFF	197.	Calsa Brushkill 64 Low Volatile
	8099	NIB	198.	Brushkiller L.V. 96 Weedkiller
	8146	CHD	199.	Chapman Permatox 10-S
	8150	CHD	200.	Chapman Penta WR Concentrate 1-5
	8165	LAT	201.	Later's Mite Killer
	8201	WEA	202.	Weedex Clover and Chickweed Bar Chemical Weedkiller
	8227	ROR	203.	Roz-Seal-Tox PS23 Wood Sealer & Preventer

	8248	CHP	204.	Chipman Thiodan 50% Wettable Powder Insecticide
	8255	DOW	205.	2,4-D Low Volatile 64 Farm Weedkiller
	8258	ROH	206.	Kelthane AP Agricultural Miticide W.P.
	8277	CYC	207.	Cygon 4-E Emulsifiable Concentrate Insecticide
	8309	SHL	208.	Vapona 20 E.C. Insecticide
	8311	ALS	209.	ACS "2,4,5-T" Low Volatile Brush Killer
	8328	BRH	210.	Bramco Nemagon 10.3E Soil Fumigant
	8355	TUC	211.	Grain Guard Liquid Concentrate
	8372	LAT	212.	Later's Malathion 1000 E.C. Insecticide
CUS	8374	CUT	213.	K.R.S. For Hourses Controls Screw Worms and Maggots
	8409	CYC	214.	Thimet 10% Granular Systemic Insecticide
	8425	SHL	215.	2,4-D + 2,4,5-T Liquid Brushkiller L.V. 96
	8431	DOW	216.	Esteron 3-3E Emulsifiable Concentrate
	8453	NIB	217.	Pomogreen Dust for Insects and Diseases
	8457	NIB	218.	Tree and Shrub Dust Insecticide
	8493	UAF	219.	"Summit" Low Volatile 2,4-D Iso-octyl Ester 64
	8495	UAF	220.	Summit Low Volatile 80 Emulsifiable Weed Killer
	8504	CYC	221.	Cygon Emulsifiable Concentrate Hopper Kill
	8543	PFF	222.	Calsa Brushkill 76.8 Low Volatile Brush Killer
	8547	PFF	223.	Calsa 2,4,5-T 76.8 Low Volatile Brush Killer
	8575	FIS	224.	Fisons Diazinon 50W
	8582	FIS	225.	Hopper-Tox "64" Dimethoate Insecticide
	8601	SHL	226.	Shell AA Soil Drench
	8609	DOW	227.	Dectran 25W Insecticide
	8611	DOW	228.	Dectran 2E Insecticide
	8620	BAT	229.	Bartlett Methoxychlor 50 W.P. Insecticide
	8631	VEL	230.	Velsicol Vanvel Liquid Herbicide
	8635	FIS	231.	Fisons Gesatop Brand of Simazine 50W
	8640	DUQ	232.	Du Font Hyvar X Bromacil General Weed Killer
	8651	ALS	233.	Calmix Pellets No. 2
	8654	CHD	234.	Timpreg Pak Pol-Nu Type Ground Line Pole Treatment
AMI	8655	AMC	235.	Amizine Wettable Powder, a General Weedkiller
	8656	CHD	236.	Timpreg Pol-Nu-Type Preservative Grease
	8657	NAC	237.	National Chemsearch Chemester 123 Herbicide
	8661	CHP	238.	Gramoxone Liquid Herbicide with Wetting Agent
	8662	NIB	239.	Niagara Chlordane 8 E.C. Insecticide
	8663	NIB	240.	Moracide 50 Wettable Powder Miticide
	8691	FIS	241.	Geigy Snip Fly Bands
NIH	8696	JUD	242.	Killer Kane Kartridges for Crabgrass
	8737	POP	243.	Poulin's Gopher Doom Liquid
	8741	CHV	244.	Ortho Dibrom Concentrate Non-Emulsifiable Insecticide
	8785	STD	245.	Standard Penta Concentrate 1-10 Wood Preservative
	8794	MET	246.	Gallo-Drench Greenhouse Soil Drench
	8803	PED	247.	Perthane F-4 Flowable Concentrate Insecticide
	8813	WIL	248.	Wilson's Systemic Insecticide Granules
	8826	ABE	249.	Waco Malathion Grain Protectant
	8829	NIB	250.	Gardenall Spray for Insects and Diseases
	8856	NIB	251.	Thiram 75 WP Turf Fungicide
	8885	GCP	252.	Green Cross Kil-Mor Banvel 3 Liquid Herbicide
	8899	CHP	253.	Chipman Brushkiller 96
	8901	CHP	254.	Chipman 2,4,5-T 96
	8903	CHP	255.	Chipman 2,4-D Ester 96 Liquid Weedkiller
	8928	PLC	256.	Protexall Granular Systemic Insecticide
	8929	CHP	257.	Sayfos 70 D.P. Wettable Powder Systemic Insecticide

	8938	LED	258.	Leitte Acrilo Fumigant
	8959	PFF	259.	Calsa 96 L.V. Brushkiller 2 to 1 Mix
	8964	NIB	260.	Gopher Poison contains Strychnine
	8981	GCP	261.	Green Cross Thiodan 50 W.P. Insecticide
	9000	FIS	262.	Fisons Diazinon 50 E.C. (agricultural)
	9002	FIS	263.	Fisons Diazinon 50S (Oil Solution)
	9003	DOW	264.	Tordon 10K Systemic Herbicide
	9004	FIS	265.	Fisons Diazinon 50E (Industrial)
	9005	DOW	266.	Tordon 22K Weedkiller Solution
	9007	DOW	267.	Tordon 101 Mixture Systemic Brushkiller Solution
	9015	FIS	268.	Fisons Primatol O Brand of Prometone 25E
	9045	GCP	269.	Green Cross Low Volatile 2,4,5-T Ester 96
	9051	LAT	270.	Later's Low Volatile Brush Killer 80
	9062	DUQ	271.	Du Pont Hyvar X-WS Bromacil General Weed Killer
	9072	SHL	272.	Nemagon 130 E.C. Soil Fumigant
	9073	ELA	273.	Elanco Dymid 80W
	9074	RAL	274.	Cygon 4-E Emulsifiable Concentrate
	9080	NIB	275.	Thiodan 4E Insecticide
	9148	NAC	276.	National Chemsearch C-A-D - Fungicide
	9152	CHP	277.	Chipman D-L Seed Treatment
AMI	9157	AMC	278.	Amchem Fenac Liquid
CBS	9161	MUS	279.	MSCO Fungicide "VX" (Wettable Powder)
CHH	9163	CHG	280.	Dexon 35% Wettable Powder Turf and Soil Fungicide
	9188	GCP	281.	Green Cross Dormant and Lawn Spray
	9247	MCC	282.	McClelland's Lindane 10% Emulsifiable Concentrate
	9267	LAT	283.	Later's Gopher Poison
	9268	PFF	284.	Calsa Brushkill 96 Low Volatile
	9269	NIB	285.	Thiralin Rape and Mustard Seed Treatment Powder
	9283	GCP	286.	Green Cross DCL Dual Purpose Seed Treatment Powder
	9287	NIB	287.	BHC 12 Wettable Powder Insecticide
CHH	9291	CHG	288.	Meta-Systox-R Systemic Spray Concentrate Insecticide
	9327	DOW	289.	Tordon Beads Herbicide Weed and Brushkiller
	9332	LAT	290.	Later's Lindane 20 E.C. Insecticide
	9337	CYC	291.	Malathion LV Concentrate Insecticide
	9342	ALS	292.	Calmix Pellets No. 3 Weed Killer and Soil Sterilant
	9347	NIB	293.	Niagara Cygon 4 E Insecticide
	9355	SHL	294.	2,4-D Liquid Weedkiller Ester L.V. 96
	9362	FIS	295.	Gesagard contains Geigy Prometryne
BRP	9377	CLI	296.	Penfume Liquid Fumigant
	9382	PFF	297.	Pfizer Cygon Dimethoate 4E Insecticide
CHH	9398	CHG	298.	Guthion Insecticide Spray Concentrate
MCM	9404	CBR	299.	Formula GH-20 an Inssecticide Fogging Solution
AMI	9415	AMC	300.	Amchem Phenox - Liquid Herbicide
	9425	MAT	301.	Master Building Insect Oil
	9427	PLG	302.	Plant Fog Sulfotep Thermal Fogging Solution
CHH	9428	CHG	303.	Co-Ral Emulsifiable Concentrate Livestock Insecticide
	9429	GCP	304.	Green Cross Drillbox Bunt-No-More Powder
	9439	NIB	305.	Brush Killer 1:1 Liquid Herbicide
	9500	GCP	306.	Green Cross Drill Box DCL
	9505	CHP	307.	Chipman B-3 Dual Purpose Insecticide-Fungicide
	9506	PFF	308.	Pfizer Brushkill 64 Low Volatile Esters of 2,4-D and 2,4,5-T
	9510	MBY	309.	Buctril M Bromoxynil Octanoate and MCPA Ester
	9524	LAT	310.	Later's Hybor-D-Granular Soil Sterilant
	9526	MET	311.	Metasol - 10 Liquid Phenyl Mercuric Acetate
	9531	PED	312.	Aquathol Plus Granular Aquatic Herbicide
	9560	DOW	313.	Esteron 96-E L.V. Liquid Farm and Industrial Weed Killer
	9561	PFF	314.	Pfizer 2,4-D Low Volatile 96 Ester Liquid Weed Killer
	9569	LAT	315.	Later's PMA - 10 Liquid Phenyl Mercuric Acetate
CHH	9570	CHG	316.	Baytex Liquid Concentrate Insecticide contains Fenthion
	9575	AYH	317.	Fintrol R-5 Granular Fish Toxicant (antimycin)

	9577	NIB	318.	Perthane 4.8 E.C. Liquid Emulsifiable Concentrate Insecticide
	9580	MET	319.	Thiram 75% W.P. Turf Fungicide
	9581	NIB	320.	Estaprop LV Liquid Weedkiller
	9587	ALS	321.	No-Weed Low Volatile Liquid Weed Killer
	9606	VEL	322.	Velsicol Banvel 3 Liquid Herbicide
	9621	NIB	323.	Thiram 75 Seed Fungicide Dust
	9623	LJE	324.	Tim-Ber-Lox Fungicided Wood Preservative
	9625	OLH	325.	Ochemco Low Volatile 2,4-D Ester 96 Liquid Weed Killer
	9629	CHD	326.	Weed-Free G, Granular Non-Selective Grass and Vine Killer
	9646	NIB	327.	Polyram - C Turf Fungicide Wettable Powder
AMI	9651	AMC	328.	AMCHEM BROMINAL Emulsifiable Weed Killer
	9664	DOW	329.	Esteron T-6E Emulsifiable Concentrate
	9733	LAT	330.	Later's Premium Weed and Pave Solution
	9761	OLH	331.	Ochemco Low Volatile 2,4-D Ester 80 Liquid Weed Killer
	9763	PLG	332.	Plantco Turf and Soil Fungicide
	9784	DOW	333.	96 Brush Killer 2DO-ITO Emulsifiable Concentrate
	9785	DOW	334.	112 Brush Killer DO Emulsifiable Concentrate
	9786	DOW	335.	112 Brush Killer DO-TO Emulsifiable Concentrate
	9787	DOW	336.	112 Brush Killer TO Emulsifiable Concentrate
	9807	INT	337.	Co-op Cygon 4EC
	9816	NIB	338.	Mushroom House Fungicide Soluble Granular Powder
	9825	NAP	339.	Vorlex 201 Preplant Soil Fumigant
	9833	NIB	340.	Linazine W. Pre-emergent Herbicide
LEI	9835	RES	341.	Rentokil Alphakil - Quick Humane Mouse Killer
AMI	9856	AMC	342.	Brominil-M-Emulsifiable Weedkiller
MCG	9870	AIA	343.	Cadex Liquid Cadmium Turf Fungicide
	9871	PLG	344.	Plantco Turf Fungicide
SHE	9873	SUT	345.	Flora-Fog Dithione Greenhouse Fogging Solution
	9879	VAL	346.	Guardsman 50% Ovex Wettable Powder Miticide
	9885	NIB	347.	Brushkiller 1:1 LV 112 Liquid Herbicide
	9894	GCP	348.	Green Cross Res-Q Non-Mercurial Seed Disinfectant Powder
	9896	GCP	349.	Green Cross 75% Thiram Wettable Powder for Turf Diseases
AMI	9907	AMC	350.	Aqua-Kleen 20 Granular-A
	9916	PLG	351.	Plantfume Lindane Smoke Fumigators
	9918	PLG	352.	Plantco Systemic Insecticide Emulsifiable Concentrate
	9934	PFF	353.	Calsa Chem-Cop 53 Wettable Powder
	9940	STF	354.	Perthane 4-E Emulsifiable Liquid Insecticide
	9945	DIT	355.	Lindane 10% Emulsifiable Liquid Insecticide
	9964	CHV	356.	Ortho Difolatan 4 Flowable Suspension Fungicide
MCN	9984	CBR	357.	Formula GH-31 a Miticide Fogging Solution
	10030	FIS	358.	Fisons Gesaprim Brand of Atrazine 80W
	10031	NAP	359.	Panoram RPX Combination Drill Box Seed Treatment
	10032	MBE	360.	Cygon 4-E Emulsion Concentree Systemic Insecticide
	10045	GCP	361.	Green Cross Drillbox Lindasane Combination Seed Treatment
	10047	COQ	362.	Cooper Water Soluble Rat and Mouse Killer Powder
	10060	VAL	363.	Guardsman Ester Brushkiller
	10069	IMP	364.	Esso 2,4-D LV-80 Liquid Weedkiller
CBU	10086	USB	365.	Hibor C. Granular Weed and Grass Killer
	10093	MRE	366.	Marquette Thiram 75 Desinfectant des Graines
	10094	CHV	367.	Bux Ten Granular Insecticide
	10100	GCP	368.	Green Cross Thiodan 4 Emulsifiable Concentrate
	10103	PLG	369.	Plant Fume Azobenzene Miticide Smoke Fumigator
	10104	GCP	370.	Green Cross Cygon 4E Emulsifiable Concentrate
	10120	PFF	371.	Calsa 22% Nabam Liquid Fungicide
	10142	CHH	372.	Cygon 4-E Emulsifiable Concentrate
CBU	10145	USB	373.	Killpower, New Improved Granular Ureabor
	10146	DIT	374.	Fenthion 50E Emulsifiable Liquid Insecticide
	10147	DIT	375.	Fenthion 50S Oil Concentrate Insecticide
	10148	DIT	376.	Thiofen Fogging Oil Concentrate
	10157	ALS	377.	ACS LV 112 Low Volatile 2,4,5-T Brush Killer

	10158	ALS	378.	ACS LV 120 Emulsifiable Brush Killer
	10161	ALS	379.	ACS 2,4-D Low Volatile Ester 112 Weed Killer
	10163	VAR	380.	Guardsman Ester 80 Weedkiller
CHH	10175	CHG	381.	Guthion 2% Dust Insecticide
CHH	10177	CHG	382.	Dasanit 15% Granular Insecticide-Nematicide
	10185	CHP	383.	Thiodan 4 Emulsifiable Concentrate
	10190	NIB	384.	TAndex 80 W. Herbicide Wettable Powder
	10197	PFF	385.	Calsa Thiram 75 Seed Fungicide Dust
	10210	DOW	386.	Tordon 212 Mixture Weedkiller Solution
	10215	CHP	387.	Chipman Brushkiller 112
	10216	PED	388.	Herbicide 273 Liquid
	10217	INT	389.	Co-op L.V. 2,4-D Ester 96 Liquid Weed Killer
	10220	ROH	390.	Karathane L.C. Agricultural Fungicide and Miticide
	10231	CAY	391.	Zep Formula 777 - Weed Killer
	10247	GCP	392.	Dual Purpose Res-Q Non-Mercurial Seed Disinfectant
CHH	10249	CHG	393.	Gophacide 0.1% Bait Rodenticide
	10257	LAT	394.	Later's Weedkiller Low Volatile 2,4-D Ester
	10276	FIS	395.	Fisons Diazinon-Lindane Insecticide
	10277	FIS	396.	Basudin Brand of Diazinon-Lindane-Captan
CHU	10301	USB	397.	Biobor J F A Liquid Biocide
	10303	CYC	398.	Liquid Cyanamid 50 General Contact Weedkiller
	10306	CLR	399.	L.T.F. Liquid Turf Fungicide
	10322	MBY	400.	Zolone 30% Phosalone Insecticide Wettable Powder
	10324	KEN	401.	Riddex Cythion Grain Protectant
	10330	NIB	402.	Bordo Spray Wettable Powder Fungicide
	10331	DUQ	403.	LVK Liquid Vegetation Killer
	10332	DIS	404.	Primatol A 80 contains Atrazine - Wettable Powder
	10339	CHP	405.	Mergamma M-M Drill Box Dual Purpose Seed Treatment
	10357	SPL	406.	20% Vapona Insecticide Resin Granules
	10359	NIB	407.	Furadan 10 Granular Insecticide
	10400	LAT	408.	Later's Liquid Puracide-Organic Mercury Fungicide
	10430	WEI	409.	Assault Liquid Vegetation Killer
MCN	10433	CHE	410.	Formula MU-23 Emulsifiable Concentrate Insecticide
	10439	DOW	411.	Dursban M Emulsifiable Insecticide
CHH	10456	CHC	412.	Tiguvon Spray Concentrate Animal Insecticide
CHH	10457	CHC	413.	Tiguvon Pour-on Cattle Insecticide
	10458	GCI	414.	Green Cross Amine Weed Killer Liquid
	10467	NIB	415.	Gas, M-3 Cartridges
	10496	GCP	416.	Green Cross Galecron 50EC
	10518	MOI	417.	Lasso Emulsifiable concentrate Weed Killer
	10525	CYC	418.	Accothion 8 E.C. Insecticide contains Fenitrothion
	10531	CHP	419.	Borea X Granular
	10532	CYC	420.	Thimet 15-G
	10536	NIB	421.	Liquid Pocket Gopher Poison
	10538	IDF	422.	Les Engrais Liquid Cyanamid General Contact Weed Killer
	10540	KEM	423.	Kem-Fume Grain Fumigant
	10544	NIB	424.	Fixed Copper Wettable Powder Fungicide
BAU	10561	ROS	425.	Ross Systemic Insecticide Cartridges
	10564	NAC	426.	National Chemsearch NS-610 Weed Killer Soil Sterilant
	10569	SAF	427.	Woodchuck Bomb
	10608	STF	428.	Dyfonate 5G and Organophosphorus Soil Insecticide Granules
	10610	STF	429.	Dyfonate Thiram 5-10G
CUS	10612	CUT	430.	K.R.S. Smear for Horses
	10614	NIB	431.	Fundal SP-Miticide-Insecticide
	10622	VAR	432.	Guardsman Brushkiller 96 Emulsifiable Concentrate
	10628	DUQ	433.	DuPont Sinbar Terbacil Weed Killer
	10637	DOW	434.	Dursban 4E Emulsifiable Insecticide

	10660	INT	435.	Co-op N.M. Seed Treatment Powder
	10661	INT	436.	Co-op Rapeseed and Mustard Drill Box Seed Treatment
	10662	INT	437.	Co-op N.M. Dual Purpose Seed Treatment Powder
	10665	CHV	438.	Ortho Super-B-Gon
	10666	NIB	439.	Furadan 5 Granular Systemic Insecticide
	10667	GCP	440.	Green Cross Diazinon-Lindane Insecticide
	10673	DOW	441.	Dursban 4E Emulsifiable Insecticide
	10676	PLG	442.	Plant Fog Dicofol A Thermal Fogging Miticide Solution
	10693	DIT	443.	Dichlorvos 20s Oil Concentrate Insecticide
	10694	DIT	444.	Dichlorvos 20E Emulsifiable Concentrate Liquid Insecticide
	10695	FIS	445.	Fison's Lovozal 20W 20% Wettable Powder Miticide
	10702	GCP	446.	Green Cross Drillbox Wireworm Killer contains Lindane
	10716	CHP	447.	Chipman Chlordane 8 Emulsifiable Concentrate Insecticide
	10732	VAR	448.	Guardsman Dinitro Amine Weedkiller
	10753	SHL	449.	Bladex Herbicide for Use in Corn Fields 80% Wettable Powder
CHH	10776	CHG	450.	Folithion Liquid Concentrate Forest Insecticide
	10783	PFF	451.	Pfizer Malathion Liquid Grain Protectant
	10791	FIS	452.	Fison's Lovozal 40W 40% Wettable Powder Miticide
	10796	ANA	453.	Super Anbrex Brand of Atrazine 80W (80% Wettable Powder)
	10808	CER	454.	Soil-Ster Non-Selective Weed Killer
	10816	GCP	455.	Green Cross Poa Annual Killer Liquid Herbicide
	10820	KEM	456.	Riddex F-50 Fogging Insecticide Concentrate
	10821	KEM	457.	Riddex Fenthion 50E Emulsifiable Concentrate Insecticide
CHH	10826	CHG	458.	Furadan 5 Granules Systemic Insecticide
CHH	10827	CHG	459.	Furadan 10 Granules Systemic Insecticide
CHH	10840	CHG	460.	Bayluscide 5% Granular Molluscicide
CHH	10841	CHG	461.	Bayluscide 5% Granular Sea Lamprey Larvicide
CHH	10842	CHG	462.	Bayluscide-TFM Wettable Powder Sea Lamprey Larvicide
	10847	GCP	463.	Galecron 95 SP Miticide-Insecticide
	10859	CBE	464.	Supep-Lastic Wood Preservative & Sealer - Clear
CHH	10895	CHG	465.	Dasanit plus Thiram 5% - 10% Granular Insecticide-Fungicide
	10896	CHP	466.	Chipman Drillbox D-L Plus Insecticide-Fungicide
	10903	CGA	467.	Princep 50W Wettable Powder Herbicide of Simazine
	10904	CGA	468.	Princep 50W Wettable Powder Herbicide of Simazine
	10905	CGA	469.	Aatrex 60W Wettable Powder Herbicide of Atrazine
	10906	CGA	470.	Primatol 80W Wettable Powder Herbicide of Atrazine
	10907	CGA	471.	Simaprim 80W Wettable Powder Herbicide of Simazine
CHH	10910	CHG	472.	Bay 94337 70% Wettable Powder Herbicide
	10924	VAR	473.	Guardsman V.W. & R Stain Control Liquid Fungicide Concentrate
	10925	VAR	474.	Guardsman Penta Preservative Concentrate 1-10
	10928	CGA	475.	Aatrex 90W Wettable Powder Herbicide of Atrazine
	10943	PFF	476.	Calsa Dasanit + Thiram 5% - 10% Granular Insecticide-Fungicide
	10944	SAN	477.	Sanfax WK - 82 Low Volatile Liquid Herbicide
	10953	IMP	478.	Flit Weed Killer
	10960	FED	479.	Rape and Mustard Seed Protectant
	10975	CGA	480.	Basudin 50W Wettable Powder Insecticide contains Diazinon
	10976	CGA	481.	Basudin 50E Emulsifiable Insecticide contains Diazinon
	10977	CGA	482.	Basudin 50S Solution Insecticide contains Diazinon
	10979	CGA	483.	Basudin 50 EC Emulsifiable Concentrate Insecticide
	10983	GCP	484.	Fenitrothion Techn ical Insecticide
	10989	CGA	485.	Gesagard 50W Wettable Powder Herbicide of Prometryne
	10993	DIT	486.	Lindane 10S Oil Concentrate Insecticide
	10997	GCP	487.	Green Cross Brushkill Low Volatile 2,4,t-T Ester 112
	10998	GCP	488.	Green Cross 2 to 1 Brushkiller 96 Low Volatile Liquid
	11011	CHV	489.	Ortho Weed-B-Gon Bar

	11012	CHV	490.	Ortho Weed-B-Gon Clover and Chickweed Bar
	11013	INT	491.	Co-op Chlordane 8 EC Soil Insecticide
	11017	INT	492.	Co-op Cythion Grain Protectant E.C.
	11018	DUQ	493.	Hyvar X-L Bromacil Weed Killer
	11019	DUQ	494.	Hyvar X-P Bromacil Weed and Brush Killer
	11022	BAY	495.	Bartlett Cygon 4E Systemic Insecticide
	11025	UNR	496.	Liquid Dyanap Weedkiller
CHI	11029	CHG	497.	Baygon U-L-V Spray (Ultra Low Volume) Insecticide
	11032	LAT	498.	Later's Dandelion Weed Killer Emulsifiable Concentrate
	11033	GEI	499.	Atrazine 80 WP Zorka Brand Selective Herbicide
	11045	CGA	500.	Aatrex Liquid Herbicide
	11049	FIS	501.	Fisons Dursban 50E Emulsifiable Insecticide
	11053	CGA	502.	Prometone 25E Emulsion Herbicide
	11059	DOW	503.	Zectran FS 5 Insecticide Solution
	11060	DOW	504.	Zectran FS 15 Insecticide
MOL	11063	MOB	505.	Liquid Noxtane 3-A Wood Fungicide Concentrate
	11064	VPC	506.	Dynafog 90 Concentrate
	11103	CHE	507.	Chapman Weed-Free H C 1.6 Pellets
	11108	AYE	508.	Fintrol - 15 (Antimycin A) Granular Fish Toxicant
	11109	AYE	509.	Fintrol Concentrate (Antimycin A) Liquid Fish Toxicant
	11112	CHD	510.	Chapman Permatox 120C Fungicide Concentrate
	11128	CHI	511.	Gramoxone S Liquid Herbicide contains paraquat
SUM	11137	SUC	512.	Sumithion Technical
SUM	11138	SUC	513.	Sumithion 100EC
	11142	GCI	514.	Green Cross General Weed Killer Emulsifiable
CHP	11148	AYE	515.	Cutrine Algaecide
AMI	11153	ZEN	516.	Weedone Brushkiller 170
	11154	CYL	517.	Birlane Insecticide 3% Granules
	11157	SEP	518.	Dytop Liquid Potato Top Killer
	11161	ATL	519.	Urox Liquid Oil Concentrated Weed Killer
	11169	NIB	520.	Lindane 20 E.C. Insecticide
	11176	GCI	521.	Green Cross D-L Plus Captan Powder contains Diazinon, Lindane, Captan
	11184	NIB	522.	Diuron 80 WP Herbicide
	11185	NIB	523.	Monuron 80 WP Herbicide
CHI	11187	CHG	524.	Co-Ral Cattle Duster contains Coumaphos
	11189	NIB	525.	Tandex-Diuron 80 WP Herbicide
	11190	CHI	526.	Chipman Atrazine 80W Wettable Powder Herbicide
	11191	MRZ	527.	Marzine formulation of Atrazine 80W Herbicide
	11195	SOJ	528.	Atrafine Brand of Atrazine 80W Herbicide (80% Wettable Powder)
VAN	11209	OLY	529.	Olympic Toxal Wood Preservative contains Phenylmercury Oleate
	11211	MOL	530.	Lasso Weed Killer
	11224	VEL	531.	DyCleer Industrial Liquid Herbicide contains Dicamba
	11246	INT	532.	Pool Brand Low Volatile 2,4-D Ester 112 Liquid Weed Killer
	11258	NIB	533.	Silvaprop 1:1 Brushkiller 112 oz. Liquid Herbicide
	11259	MOL	534.	Lasso 10 Granular Herbicide
	11261	INT	535.	Co-op Co-San Liquid Seed Treatment (TCMTB 30 EC)
	11264	VEL	536.	Phosvel Liquid Insecticide
	11271	LAT	537.	Later's Low Volatile Brush Killer E.C.
	11274	CGA	538.	Gesagard 80W Herbicide Wettable Powder Formulation of Prometryne
	11286	BAY	539.	Spot Insecticide Systemique granule contient du Di-Syston
	11288	GCI	540.	SWH 1520 Herbicide Liquid containing 2,4-D Dicamba and Benzolin
	11307	FUH	541.	HK Grain Fumigant
	11312	STF	542.	Sutan + 8E Herbicide
	11330	INT	543.	Pool N.M. Dual Purpose Drill Box Seed Treatment Powder
	11333	STD	544.	Stan-Chem 2,4-D Ester Low Volatile 96 Weed Kil E.C.
LEI	11335	BAD	545.	Baird's Dinoseb, Pre-emergence Type Water Soluble Dinitro Weed Killer

	11336	CHP	546.	Pirimor 50W Wettable Powder Insecticide
MLL	11339	SCT	547.	Scotts ProTurf Broad Spectrum Granular Fungicide
	11351	DUQ	548.	Krovar 1 Weedkiller Wettable Powder contains Bromacil & Diuron
	11354	CGC	549.	Green Cross Du-Ter Fungicide containing fentin hydroxide
	11355	ROH	550.	Rohm & Haas Sure-Kill Potato Top Killer with Dinoseb
	11356	SHL	551.	2,4-d and 2,4,5-T Liquid Brushkiller LV 64
	11366	STF	552.	FIA 80-20 Grain Fumigant
	11373	KFM	553.	Riddex Chlordane 80 Emulsifiable Concentrate Insecticide
	11386	PFP	554.	Pfizer Liquid Cyanamide General Contact Weed Killer
	11390	OLS	555.	Ochemco Rapeseed and Mustard Seed Treatment Powder
	11398	VAR	556.	Guardsman Cythion 1000 Grain Protectant and Insecticide
	11407	INT	557.	Pool Brand Rapeseed and Mustard Drill Box Seed Treatment Powder
	11422	UNR	558.	Vitaflow Dual Purpose Liquid Seed Protectant
	11424	DOW	559.	Lorsban 4C Emulsifiable Insecticide
SOJ	11439	PHT	560.	Atraphyt Brand of Atrazine 80W
	11442	VAR	561.	Guardsman Dinitro General Weed Killer E.C.
	11445	GCP	562.	Ekko 80W Corn Herbicide
	11449	MRZ	563.	Program Formulation of Atrazine 80W and Propachlor
	11451	INT	564.	Co-op D-L&C Insecticide-Fungicide Dust Seed Treatment
	11461	VAR	565.	Guardsman Potato Top Killer
	11493	NIB	566.	Propaturf Liquid Turf Herbicide
	11494	MRZ	567.	Marzone Weedkiller containing Diuron
	11522	LAT	568.	Later's 25% Lindane Livestock Insecticide
	11529	INT	569.	Dual Purpose Non-Mercurial Liquid Seed Treatment
	11539	MBY	570.	Totril Emulsifiable Selective Weed Killer
LEI	11545	BAD	571.	Baird's Dinoseb Potatoe Top Killer
	11547	VEL	572.	Cy-Cleer Industrial Liquid Herbicide
	11572	NIB	573.	Sumithion 10-E Insecticide
JAC	11578	AYE	574.	Swimtrine Liquid Algaecide for swimming pools
	11597	CHC	575.	Mag-X-String
	11605	NIB	576.	Super-Spred Surfactant
	11624	NIB	577.	Estasol 3:1
	11625	CHI	578.	Chipman Diuron Weed Killer
	11643	NIB	579.	2,4,5-T LV 112
	11649	NIB	580.	Butoxy - D 3:1
	11681	SAN	581.	GP 836 Cythion Liquid Grain Protectant
	11724	DUB	582.	DuIn 70 Non-selective Weed and Grass Killer
	11761	STF	583.	Sutan-Atrazine 18-6 Granules
	11848	CHC	584.	Chempara Potato Sprout Inhibitor
	11933	CHP	585.	Chipman Diazinon 50 W.P.
	11934	CHP	586.	Chipman Diazinon 50 E.C.
	11935	CHP	587.	Chipman Diazinon 50 E.
	11938	CHP	588.	Chipman Atrazine 80 W.P.
	12066	DOQ	589.	Telone* C
	Pending	CHP	590.	Trithion Oil Emulsifiable Insecticide

PESTICIDES THAT ARE CONTAINED IN FERTILIZER

Registration Number under Fertilizer Act (Canada)	Registrant under Fertilizer Act (Canada)	Item	Pesticide
119	Cyanamid of Canada	591.	Aero (R) 5-20-10 with Phorate
228	Cyanamid of Canada	592.	Aero (R) 10-10-10 with Phorate
893	Cyanamid of Canada	593.	Aero (R) 8-32-16 with Phorate
1071	Cyanamid of Canada	594.	Aero (R) 12-24-12 with Phorate
1162	Chemagro Corp.	595.	Systemic 2 in 1 Rose Care 12-9-6 Rose Food with Insecticide
1370	Chevron Chemical	596.	ORTHO Systemic Rose & Flower Care 8-8-8 with Disulfoton
1527	Cyanamid of Canada	597.	Aero 18-46-0 with Phorate
1528	Cyanamid of Canada	598.	Aero (R) 11-48-0 with Phorate
1628	So-Green Ind.	599.	So-Green 7-14-7 for Roses, Flowers and Perennials
1788	Shamrock Chemical	600.	Shamrock 8-32-16 with Disulfoton for Beans
1908	Simpson-Sears	601.	Cross Country Lazy Man's Rose and Flower Garden Miracle Worker
1919	Elanco	602.	Elanco 5-10-5 for Roses, Flowers, Perennials
1939	Shamrock Chemical	603.	Shamrock 15-15-15-15 with Disulfoton for Corn
1940	Shamrock Chemical	604.	Shamrock 18-46-0 with Disulfoton for Corn
2059	Green Valley	605.	Green Valley 6-10-4 Systemic Rose and Flower Care
2061	Manchester Prod.	606.	Super Green 10-6-4 with 2,4-D
2063	Manchester Prod.	607.	Super Green 7-7-7 with 2,4-D
2072	C.I.L.	608.	C-I-L Rose Doctor Rx 6-9-6 with Eptam, Disulfoton, Chlordane
2083	Chevron Chem.	609.	ORTHO Systemic Rose and Flower Care 8-12-4 Plant Food
2085	Chevron Chem.	610.	ORTHO 3-Way Rose and Flower Care 8-12-4
2108	C.I.L.	611.	C-I-L Rose Doctor 6-9-6 with Eptam Disulfoton, Chlordane
2114	O.M. Scott & Sons	612.	22-5-3 with Thiran 5.6% and phemyl mercuric acetate 0.8%
2115	So-Green Ind.	613.	So-Green 7-9-5 with Disulfoton 1%
2116	So-Green Ind.	614.	So-Green 12-10-10 with Disulfoton 1%

O. Reg. 618/74, Sched. 2.

Schedule 3

AGENT	REG-IS-TRA-TION NO.	REGIS-TRANT	ITEM	PESTICIDE
	34	STD	1.	Standard Registered Formaldehyde Solution Fungicide
	179	GRA	2.	Meta Slug Killer
	243	CHP	3.	Atlacide - Sodium Chlorate Weedkiller
	304	NAA	4.	Era Insecticide with Chlordane 2%
	685	NOX	5.	Noxall Earwig Bait
	893	WIL	6.	Wilson's Mouse Treat contains 0.4% Strychnine
	935	NOX	7.	Noxall Moucide contains Strychnine
	967	BET	8.	Bertrand Roach Powder
COU	997	MBS	9.	Corry's Slug and Snail Death
	999	CHP	10.	Chipman Warble Powder - Rotenone Insecticide
	1054	PSA	11.	"Reel" Lindane Residual Insecticide
	1193	BRG	12.	Mouse-Cop Poisoned Mouse Seed
	1222	CBT	13.	New Power General Insecticide - Space & Contact Spray
	1337	PIE	14.	Pied Piper Insecticide
	1341	BEA	15.	Beacon Mouse Killer contains Strychnine
	1420	DUQ	16.	Du Pont Ammate X Weed and Brush Killer
	1524	SIR	17.	Driomite (Paradichlorobenzene) Crystals
	1546	CAR	18.	Noranda Brand Copper Sulphate Crystals
	1745	CBT	19.	New Power Insecticide Powder contains Chlordane
	1757	SWH	20.	Swish Cockroach Surface Insecticide
	1787	BEA	21.	Atomik 2,4-D Liquid Amine Weed Killer
	1820	JBD	22.	Weedanol 2,4-D Liquid Lawn Weed Killer
	1862	EAN	23.	Eaton's 2,4-D Weed Killer (Amine Salt)
	1872	DUQ	24.	Du Pont Fermate Ferban Fungicide
	1981	GCP	25.	Green Cross 76% Wettable Karbam Ferbam Black Fungicide
	2142	CHR	26.	Cristaux Antimites Choisy Paradichlorobenzene
	2150	NOX	27.	Noxall Slugo Metaldehyde Bait
	2238	CHP	28.	Chipman 2,4-D Amine 80 Liquid Weedkiller
	2269	CHP	29.	Chipman Ferbam Dust Fungicide
	2441	ROH	30.	Dithane Z-78 W.P. Zineb Agricultural Fungicide
	2503	GCP	31.	Green Cross Warble Powder - 5% Rotenone
	2592	RIA	32.	Riess 2% Chlordane Surface Spray Insecticide
	2632	JBD	33.	Weedanol 2,4-D Amine 80
	2687	DOW	34.	Formula 40 Liquid Farm Weedkiller
	2760	PLG	35.	Pest Clor 40W 40% Technical Chlordane
	2766	GCP	36.	Green Cross Ferbam Karbam Black Dust Fungicide
	2791	PLG	37.	Slug-Em Bait contains Metaldehyde
	2833	GCP	38.	Green Cross 40% Technical Chlordane Emulsion
	2851	LAT	39.	Later's Weed Killer 2,4-D Amine Liquid
	2887	CBG	40.	Mix-Odor Paradichlorobenzene
	2915	CHV	41.	Orthorix Spray Superior Lime-Sulphur Formulation
	2936	CGC	42.	Rex Mouse-Tax contains Strychnine
	3063	CHP	43.	Warbicide 5 Rotenone Insecticide
	3082	DOW	44.	Dow Sodium TCA 95% - Grass and Conifer Killer
	3170	VAR	45.	Cypro Emulsion Concentrate
	3186	GCP	46.	Green Cross Amine 80 Liquid 2,4-D Weed Killer
	3215	PIE	47.	Pied Piper Dog Shampoo contains Chlordane
	3277	PIE	48.	Pied Piper Insecticide 2% Technical Chlordane
	3282	GCP	49.	Green Cross Residual Household Spray
CBU	3289	USB	50.	20 Mule Team Concentrated Borascu
	3298	GCP	51.	Green Cross Rotenone 5% for Warble Fly Control
	3323	NIB	52.	Niagara Ferbam Wettable Powder Fungicide
	3384	CHP	53.	Chipman TCA, 95% Sodium Salt, Grass Killer Powder
	3413	PIE	54.	Pied Piper Kwik-Kill Mouse Seed
	3453	MBE	55.	Cryolox Marquette Insecticide
	3465	BIE	56.	Bikoe 2% Chlordane Residual Insect Spray
	3479	GCP	57.	Green Cross Ant and Grub Killer (5% Chlordane Dust)
	3517	ALC	58.	No-Weed 2,4-D Amine 80 Liquid Weed Killer
	3518	LAT	59.	Later's 5% Chlordane Dust
	3541	CBT	60.	New Power Residual Spray Containing Chlordane and Lindane

	3608	TET	61.	Nevarot Water Repellent Wood Preservative
	3645	KEM	62.	Ded-Rat Rodenticide (containing Warfarin)
	3676	INT	63.	Co-op 2,4-D Amine 80 oz. Liquid Weed Killer
	3713	BRG	64.	Fairview Warfarin Rat Poison
	3763	SAR	65.	Sarm 0.5% Warfarin Rat Poison Concentrate
	3777	LAT	66.	Later's Zineb Dust - Organic Fungicide
	3780	CHV	67.	Orthocide 50 Wettable Powder Fungicide contains Captan
	3784	NIB	68.	Ziram Wettable Powder Fungicide
	3794	PLG	69.	No Damp for Damping Off Diseases in Seedlings & Cuttings
	3846	MBY	70.	Merfusan Mercury Bichloride - Calomel Preparation
	3856	PEM	71.	Pestroy Residual Insecticide contains Chlordane
	3884	CAX	72.	Brassicol Soil Disinfectant contains Quintozene
	3913	CHP	73.	Chipman Cucurbit Dust Insecticide - Fungicide
	3925	AIR	74.	Air-Way Moth Control (Paradichlorobenzene)
AMI	3927	AMC	75.	Weedar 80 2,4-D Amine Liquid Weed Killer
	3933	KEM	76.	Riddex Seventy Concentrated Insecticide
	3937	WIL	77.	Wilson's .5% Warfarin Concentrate
	3953	GCP	78.	Green Cross Thiogreen Dust Fungicide 3.9% Zineb
	3955	CHV	79.	Ortho Tomato and Vegetable Dust Insecticide-Fungicide
	3956	PIO	80.	Pioneer Liquid Weed Killer 2,4-D Amine 80
	3960	NIB	81.	Methoxychlor 50 W.P. Insecticide
	4025	SAR	82.	Sarm Amine 2,4-D 80 Liquid Weedkiller
	4050	CHV	83.	Ortho-Klor Chlordane Dust Insecticide
	4067	CHP	84.	Methoxone Sodium 48, MCPA Liquid Weedkiller
	4084	NIB	85.	Kolo-100 Fungicide contains Sulphur and Dichlone
	4132	CHV	86.	Ortho-Klor 44 Chlordane Spray Insecticide
	4138	DUQ	87.	Manzate Maneb Fungicide
	4155	WIL	88.	Wilson's 2,4-D Amine Liquid Weedkiller
	4159	SIR	89.	Lindane 5%
	4220	TRX	90.	Protex Insecticide Chlordane 2%
	4235	SAA	91.	Triplex Residual Insecticide
	4251	NIB	92.	Weedaway Liquid Lawn Weedkiller
	4272	NIB	93.	Rotenone 5 W.P. Insecticide
	4282	GCP	94.	Green Cross 50% Malathion Emulsifiable Concentrate
	4291	NIB	95.	Amsol 80 Liquid Herbicide contains 2,4-D Amines
	4294	GCP	96.	Green Cross TCA Herbicide
	4297	CHP	97.	Herbate Amine 20-2,4-D Liquid Lawn Weedkiller
	4337	CHP	98.	Methoxone Amine 64 MCPA Liquid Weedkiller
	4343	GCP	99.	Green Cross MCPA Sodium Salt 48 Weed Killer
	4381	CAA	100.	Lindane 5% Emulsion Concentre Cadillac
	4397	WIP	101.	Ban-A-Bug Chlordane Residual Spray
	4478	NIB	102.	Malathion 25 Wettable Powder Insecticide
	4484	CHV	103.	Orthocide 75 Seed Protectant
	4504	STF	104.	Cythion 5-E Premium Grade Malthion Back Rubber Conc.
	4527	NIB	105.	Rat and Mouse Killer containing water-soluble Warfarin
	4559	STF	106.	Captan 50-W Fungicide Powder
	4590	CYC	107.	Malathion 50% Emulsifiable Liquid Insecticide
	4638	PLG	108.	Plant Products Malathion 50% Emulsifiable Concentrate
	4657	NIB	109.	Niagara Malathion 5 E.C. Insecticide
	4661	MBE	110.	Poison á Souris Marquette
	4669	ROG	111.	High Level TCA Couch grass Killer Soluble Pellets
	4709	PFF	112.	Calsa 50% Malathion Emulsifiable Concentrate
	4741	INT	113.	Co-op MCPA Amine 64 Liquid Weed Killer
	4764	TUC	114.	Florbait Fly Killer contains Dichlorvos
	4769	GCP	115.	Green Cross 25% Malathion Wettable Powder
	4775	RAW	116.	Rawleigh Aerosol Household Insecticide
	4779	WHL	117.	Hydrol - To be used as a litter spray and insecticide
	4791	RAL	118.	Purina Horse and Livestock Spray Concentrate
SEV	4837	MBB	119.	Red Devil Dry Weed Killer
	4860	CHP	120.	Chipman Malathion 50 Emulsifiable Concentrate
	4863	INT	121.	Co-op Warble Powder
	4864	CHP	122.	Chipman 25% Malathion Wettable Powder Insecticide
	4878	LAT	123.	Later's Methoxychlor 50 Wettable Powder
	4883	BEA	124.	Beacon Warfarin Concentrate, Rat & Mouse Killer
AMI	4916	AMC	125.	Weedar MCP Concentrate
	4918	KOH	126.	Dithane M-22 Agricultural Fungicide contains Maneb

	4937	ALS	127.	No-Weed MCPA Amine 64 Weed Killer
	4947	BRH	128.	"Weed-Bane Amine 80" Liquid 2,4-D Weed Killer
	4958	BBE	129.	Bexco Grains Kills Mice contains Strychnine
	4976	LED	130.	Leitte Pyrenone Emulsifiable Concentrate
BAU	4989	GAH	131.	"Arnold" Weed-O-Spray
	5007	BIR	132.	Birch's 2% Chlordane Residual Spray
	5011	INT	133.	Rat Killer Concentrate - contains Pindone
	5054	DUQ	134.	Du Pont Marlate 50% Methoxychlor Insecticide
	5056	DUQ	135.	Du Pont Marlate 2-MR Insecticide
VAR	5063	KER	136.	Three Elephant Tronbor
	5080	WIL	137.	Wilson's Water Soluble Warfarin
	5095	CGD	138.	Mitin F F High Conc
	5125	CBL	139.	Cardel Roach and Ant Killer Residual Insecticide
	5134	SIO	140.	Cross Country 2,4,-D Amine Liquid Weed Killer
	5139	CHV	141.	Orthocide Garden Fungicide contains 50% Captan
	5141	CHV	142.	Ortho Malathion 50 Spray Insecticide
	5168	PLG	143.	Plantco Mildew Dust contains 2% Dinocap
BAU	5194	GAH	144.	"Arnold" Chlordane Spray Cartridge
	5204	MEC	145.	Agristrep Streptomycin Sulfate Agricultural Type A
	5206	MBE	146.	Marquette 5% Chlordane Dust
	5212	MBE	147.	Malathion 50% Emulsion Concentrate Insecticide
	5239	MBE	148.	Mar-Cop 7 Fongicide
	5276	BAT	149.	Bartlett Malathion W.P. 25%
	5316	FIS	150.	Fison's Phenoxylene Plus MCPA Selective Weedkiller
	5322	DOW	151.	Dowpon, Wettable Powder Grass Killer with Dalapon
	5339	OSD	152.	Pentox Primer Sealer Wood Preservative Clear
	5362	SHL	153.	2,4-D Liquid Weedkiller Amine 80
	5369	LAT	154.	Later's Cutworm Ant and Grub Killer
	5371	LAT	155.	Later's Captan Fungicide 50W
	5372	NIB	156.	Sodium TCA Herbicide Soluble Powder
CBU	5398	USB	157.	D-Bor Granular Non-Selective Weed Killing Compound
	5408	NIB	158.	Ferbam 7 Dust Fungicide
	5429	GAF	159.	Gardo No. 16 Fly Bait
	5442	CHP	160.	Chipman 7.5% Captan Dust Fungicide
	5449	KIN	161.	King Rose Gladiolus and Flower Dust or Spray
	5457	GCP	162.	Green Cross Phygon XL (Dichlone 50%) Wettable Powder
	5460	INT	163.	Co-op MCPA Sodium Salt 48 Liquid Weed Killer
	5478	POL	164.	Pollock Moth Crystals - Faradichlorobenzene
	5488	WIL	165.	Wilson's 50% Captan Fungicide
	5498	PFF	166.	Calsa Alanap-3 a Selective Pre-Emergence Herbicide
	5508	LAT	167.	Later's MCPA Amine 64 Herbicide
	5514	CAA	168.	Cadillac Malathion 50% Emulsion Concentrate
	5659	WIL	169.	Wilson's Soil Sterilizer
	5655	NIB	170.	Liquid Lime Sulphur Insecticide-Fungicide
	5739	LAT	171.	Later's Slug Dust contains Metaldehyde
	5745	CYC	172.	Amino Triazole Weedkiller contains Amitrole
	5753	FED	173.	F.G.L. Rat - X Water Soluble Rat and Mouse Killer
	5780	INT	174.	Co-op Flower & Garden Dust
	5821	INT	175.	Co-op Malathion 50EC
	5835	LOR	176.	Herbinox 2,4-D Amine Liquid - Herbicide a Gazon
	5891	LOR	177.	Malathion 50E Lorrain Insecticide
	5921	NIB	178.	Niagara Niacide M Fungicide Wettable Powder
	5929	NIB	179.	Niagara Captan 7.5% Dust Fungicide
	5931	PFF	180.	Calsa Amine Liquid 2,4-D Weed Killer
	5937	MBY	181.	Tropotox MCPB Sodium Salt Solution
	5942	GCP	182.	Green Cross MCPA Amine 80 Weed Killer
	5981	NAL	183.	National MCPA Amine Weed Killer
	6006	NIB	184.	Alanap - 3 Weedkiller contains Naptalam
	6017	CHG	185.	Dipterex Sugar Bait Fly Killer
	6020	TUC	186.	Cowfly Powder contains Methoxychlor
	6022	SAF	187.	50M Emulsifiable Concentrate Insecticide

	6024	SAF	188.	No. 2 Chlordane Insecticide
	6028	NIB	189.	Phygon 50 Dichlone Wettable Powder Fungicide
	6047	ALS	190.	No-Weed MCPA Amine 80 Weed Killer
	6094	RIE	191.	Riess Vermin Killer 2% Chlordane Surface Spray
	6117	DOW	192.	MCPA Amine 64 Liquid Farm Weedkiller
	6192	GCP	193.	Green Cross Multi-Purpose Flower and Vegetable Dust
	6213	MEX	194.	Meteoricide Paradichlorobenzene Crystals
	6222	TUC	195.	Stok Pest Powder contains Lindane
	6224	TUC	196.	Stok Pest Louse Spray Concentrate
	6260	RAL	197.	Purina Malathion Spray
	6274	PFF	198.	Calsa Amine M.C.P.A. Weedkiller
	6298	LAT	199.	Later's Garden Fungicide
	6318	DOW	200.	Sodium TCA Solution Grass Killer
	6335	LAT	201.	Later's Lime Sulphur
	6339	CHV	202.	Ortho Liquid Crab Grass Killer contains AMA
	6373	SHL	203.	Shell MCPA Weedkiller Amine 80
	6375	SHL	204.	2,4-D Weedkiller Amine 96
	6410	LIE	205.	Tim-Ber-Lox Green Wood Preservative
	6437	CHP	206.	Phygon - XL Wettable Powder Fungicide
	6453	STF	207.	Vapam Soil Fumigant contains Metam Sodium
	6475	STF	208.	Cythion 25-WP Premium Grade Malathion
	6502	BRG	209.	Fairview 50% Malathion Emulsifiable Concentrate
	6514	WEA	210.	Weedex Safety Bar
	6530	MBE	211.	Marquette Amine 2,4-D - Herbicide Selectif Liquide
	6549	PLG	212.	Pest Clor Liquid 45 (formulated with Chlordane)
	6583	BRG	213.	Fairview Water Soluble Warfarin Rat and Mouse Killer
	6590	MAZ	214.	Marc-O- Crystals Paradichlorobenzene
	6630	DOW	215.	Korlan 24E Insecticide
	6639	RAL	216.	Hog and Cattle Dusting Powder
	6702	BAT	217.	Bartlett Phygon XL Dichlone Wettable Powder
	6713	LAT	218.	Later's Malathion 500 E.C.
WAG	6721	SCL	219.	Rax Rodent Killing Powder contains Pindone
CHI	6731	CHG	220.	Dyrene 50% Wettable Powder Foliage Fungicide
	6733	NIB	221.	Slug Bait Pellets Kill Slugs and Snails
	6745	PSA	222.	"Reel" Chlordane Insecticide
	6754	MBE	223.	Marquette Poudre Zineb 3.9% Dust Fungicide
	6757	REC	224.	Record's Creosote Wood Preservation Liquid
	6763	NIB	225.	Niagara Methoxol Emulsifiable Concentrate Insecticide
	6767	CHV	226.	Orthocide 75 Seed Protectant (Dry)
	6797	WIL	227.	Wilson's Ant and Grub Killer contains 50% Chlordane
	6826	AVM	228.	Moth Killer & Deodorant Paradichlorobenzene
	6839	UAJ	229.	Crag Sevin 50W (Carbaryl) Wettable Powder Insecticide
	6850	NIB	230.	Niagara Tedion 1 EC Miticide contains Tetradifon
NIB	6860	DUH	231.	Duphar Tedion V 18 Extra Smoke Generator Insecticide
BRT	6878	LET	232.	Borerkil contains BHC
	6888	CIA	233.	Methar Liquid Crabgrass Killer Disodium Methylarsonate
	6890	CIA	234.	Methar Powder Crabgrass Killer
AMI	6908	AMC	235.	Amchem Rootone with Fungicide
	6910	WIL	236.	Wilson's Tomato and Vegetable Dust
	6916	LAT	237.	Later's Slug Bait - contains Metaldehyde
	6921	MAZ	238.	Poison a Souris Marc-O (Marc-O Mice Killer)
	6930	NIB	239.	Niagara Mouse Feast - contains Strychnine
	6936	LAT	240.	Later's Slug and Snail Killer #50
	6937	TUC	241.	Acti-Dione P.M. Flower Fungicide
	6948	LAT	242.	Later's Pentachlorophenol Wood Preservative
	6952	LAT	243.	Later's Earwig Bait
	6954	LAT	244.	Later's Weevil Bait
	6962	UAJ	245.	Crag Glyodin Solution Protective Fungicide
	6967	STD	246.	Stan-Chem 2,4-D Amine 80 Weed Killer
BAU	6968	GAH	247.	"Arnold" Methuxychlorspray Cartridge
	6969	STD	248.	Stan-Chem MCPA Amine 80
BAU	6970	GAH	249.	"Arnold" Malathionspray
BAU	6972	GAH	250.	"Arnold" Captan Spray
	6977	CHV	251.	Orthocide 65 Seed Protectan
	6984	MOB	252.	Pentanol Clear Fungicide

	6994	CHP	253.	Chlorea Granular Grass and Weed Killer
	6998	LAT	254.	Later's Formalin Fungicide Solution for Seed Treament
	7028	MBE	255.	Herbicide Marquette 2,4-D Amine 80
	7029	MBE	256.	Marquette MCPA Amine 64 Herbicide
	7030	NIB	257.	Ethion 5 Granular Insecticide
	7033	PLG	258.	Liquid Super Sodar Crabgrass Killer
	7037	PFF	259.	Calsa Weed Bane Amine 2,4-D Weed Killer
	7046	MOL	260.	Vegadex Emulsifiable concentrate
	7052	NIB	261.	Thiodan 3 Dust Insecticide With Endosulfan
	7058	FIS	262.	Fisons Diazinon 5% Granular Insecticide
	7060	STF	263.	Eptam 7.2 - E Selective Herbicide
	7062	STF	264.	Eptam 5 G
	7064	NIB	265.	Niagara Dalapon Grasskiller Soluble Powder
SCS	7076	PEI	266.	Ryanicide 50 W.P. Micro-Milled
	7080	MBE	267.	Marquette Cucurbit Dust Insecticide-Fungicide
	7088	NIB	268.	Amine 80 Brushkiller 1:1 Liquid Herbicide
	7108	ALS	269.	No-Weed MCPA Sodium Salt 48 Weed Killer
AMI	7113	AMC	270.	Weedone 2,4-D Weed Killer 638
CHI	7121	CHG	271.	Dylox 50% Soluble Powder Insecticide
	7131	HOS	272.	1-18 Solignum Hydro Creosote Wood Preservative
	7137	REC	273.	Nero Insect Repellent
AMI	7162	AMC	274.	Amitrol-T Liquid Amitrole Weedkiller
	7192	CHV	275.	Ortho Phaltan 50 Wettable Powder Fungicide
	7216	WIL	277.	Wilson's All Purpose Fungicide
	7228	STM	278.	Coppertex Preservative Solution
FOB	7251	OLC	279.	Olin - Quintozene (Terraclor) 75% Wettable Powder
	7266	CHV	280.	Ortho Home Orchard Spray
	7270	DUR	281.	Dural's Wood Preservative
	7271	CHV	282.	Orthocide 75-1 Seed Protectant
	7315	CYC	283.	Cyprex Dodine 65-W Fungicide
	7319	AVM	284.	Avmor-Kil Residual Industrial Insecticide
	7331	GUF	285.	Carbyne Wild Oat Herbicide
	7335	NIB	286.	Niagara Liquid Crabgrass Killer
	7367	MBY	287.	Compitox Mecoprop Potassium Salt Solution Weedkiller
PER	7370	HYD	288.	Bugonex House Plant Bug Killer Spray
PER	7378	HYD	289.	Bugonex Rose and Plant Bug Killer Spray
PER	7380	HYD	290.	Bugonex African Violet Bug Spray
	7386	WIL	291.	Wilson's Dormant Spray Liquid Lime Sulphur
	7412	STD	292.	Selective Herbicide Chloropropham E.C.
	7416	STD	293.	Stan-Chem Selective Granular Herbicide
	7426	NIB	294.	Tedion WP Miticide contains Tetradifon
CHI	7434	CHG	295.	Co-Ral 0.5% Dust Animal Insecticide
	7446	UAJ	296.	Crag Sevin 85W (Carbaryl) Sprayable Poseer Insecticide
	7456	NIB	297.	Malathion 50 Spray Insecticide
	7480	STF	298.	Folpet (Phaltan) 50-W Fungicide
	7482	STF	299.	Folpet (Phaltan) 75-W Fungicide
	7510	NIB	300.	Ethion Superior Oil 90 Emulsifiable Insecticide
DUH	7512	DUH	301.	Duphar Tedion V 18 Smoke Generator Miticide
	7545	RAW	302.	Rawleigh Roach & Ant Killer
	7558	FLR	303.	Florex A Space and Contact Insecticide
AMI	7559	AMC	304.	Amizol Soluble Powder Weed Killer
	7560	FLR	305.	Florex Fly for Farms & Cattle
	7572	Int	306.	Co-op Dalapon Grass Killer
	7615	SHW	307.	Kem Wood Penta Sealer-Preservative (Clear) No. 453
	7616	NIM	308.	Garbo's for Garbage Cans
	7624	NIB	309.	NIAGARA THIODAN 2 Zineb 5 Dust Insecticide-Fungicide
	7633	CIA	310.	Super Methar - Liquid Crabgrass Killer
	7635	BAP	311.	36-105 Clear Liquid WOod Preservative
	7639	CHP	312.	Keglone contains diquat, a liquid herbicide

CHH	7647	CHG	313.	Dylox 5% Granular Crop Insecticide
	7648	RAL	314.	Purina Rat Kill
	7667	RAL	315.	Fly Bait (Dry Killer) contains Dichlorvos
	7671	JOH	316.	Raid Pressurized Ant and Roach Killer with Chlordane
	7674	CHV	317.	Ortho Fly Killer D Emulsifiable Concentrate
	7678	GCP	318.	Green Cross Dog Flea Powder containing Coumaphos
	7681	ALT	319.	Al-Si Cristaux Paradichlorobenzene
	7687	LAT	320.	Later's Dalapon Wettable Powder Grass Killer
	7693	CHP	321.	Borea Granular Non-Selective Grass & Weed Killer
	7695	PEN	322.	Pestroy Stored Products Insecticide
	7697	CYC	323.	Amitrole 90 Weedkiller
	7698	LAT	324.	Later's Chlordane 500 E.C. Insect Spray
	7715	PLG	325.	Skoot Repellent for Rabbits, Mice and Deer
	7717	BAT	326.	Bartlett Thiram Repellent
	7727	ALS	327.	Calmix Maintenance Weed and Grass Killer
	7739	NOZ	328.	Custom Grade Guard Insect Repellent
	7741	NOZ	329.	Custom Grade Guard Extra Strength Insect Repellent
AMI	7743	AMC	330.	Amiben Liquid Pre-emergent Herbicide
	7751	SHO	331.	Mirozene-Moth Crystals - Insecticide
	7753	PFF	332.	Calsa Amine 80 Liquid 2,4-D Weed Killer
	7754	INT	333.	Co-op Rose Dust or Spray
	7757	NIS	334.	Sevin 50 W.P. Insecticide contains Carbaryl
	7761	ALS	335.	Calmix Hoe Down Quack and Broadleaf Weed Killer
	7768	INT	336.	Co-op Barn Spray and Backrubber Concentrate
	7812	STD	337.	Stan-Chem MCPA Sodium 48 Weed Killer
	7814	GAP	338.	Gardo No. 28 Stock Fly Powder
	7819	GCP	339.	Green Cross 5% Sevin 7% Copper Dust
	7829	FIS	340.	Fisons Simazine 4G (4% Granular) Herbicide
	7835	HEC	341.	"Atra-Pell", Soil Sterilant Granules
	7839	BRT	342.	Brookdale-Kingsway's Kurall Insecticide-Fungicide
	7855	ABE	343.	Waco Chlordane #2 Residual Insecticide
	7859	CHP	344.	Chipman MCP Butyric 64 Weedkiller
	7873	MUL	345.	Muskol Insect Repellent
CHH	7876	CHG	346.	Dyrene 50% Wettable Powder Turf Fungicide
CHH	7880	CHG	347.	Meta-Systox-R 5% Granular Systemic Insecticide
	7891	NIB	348.	Solan 4 EC Weedkiller
	7893	CYC	349.	Cytrol - Amitrol-T Liquid Weedkiller
	7917	FIS	350.	Primatol Ap 5:5 Brand of Atrazine 5:5 Granular Herbicide
	7921	CHP	351.	Chipman 74% Soluble Powder Herbicide
MBR	7944	HYD	352.	Bugonex Malathion Bug Killer Liquid Concentrate
CHH	7952	CHG	353.	Bay 29493 3% Dust Ornamental Insecticide
	8020	CHP	354.	Chipman Granular Driveway Weed Killer
	8042	GCP	355.	Green Cross Sevin 50% Insecticide WP
	8043	DOW	356.	Ruelene 25 E Pour On Cattle Insecticide
	8046	NIB	357.	Rodent Repellent
	8075	NIB	358.	Captan 50 Fungicide Spray Wettable Powder
	8077	CHV	359.	Ortho Greenhouse Dibrom Insecticide
	8102	AMR	360.	Mist-Air Powder Sodium Borate Insecticide
	8103	CAO	361.	Bulldog Grip Clear Wood Preservative
	8108	LAT	362.	Later's Liquid Polysul - Superior Lime Sulphur
	8125	NIB	363.	MCP 80 Amine Weedkiller containing MCPA
	8127	NIB	364.	Ethion 2,7 Dormant Oil Emulsifiable Insecticide
	8140	LAT	365.	Later's Onion Maggot Granules
	8144	LAT	366.	Later's 15% Zineb Dust Fungicide
	8151	UAJ	367.	Crag Sevin 80S
	8156	NIB	368.	Zineb 15 Mushroom Dust Fungicide
	8159	CHP	369.	Chipman Lawn Weedkiller
CHH	8166	CHG	370.	Co-Ral Neguvon Pressurized Spray
	8167	MOL	371.	Avadex BW (Triallate Selective Herbicide)
	8168	CHD	372.	Pol-Nu Pak Ground Line Pole Treatment Bandage
	8169	GRA	373.	Meta Slug Pellets
	8170	CHD	374.	Pol-Nu Fenta Preservative Grease
	8171	NIB	375.	Mecoturf 48 Liquid Weedkiller
	8174	DUQ	376.	Du Pont Arasan 42S Thiram Fungicide and Repellant
	8184	CHP	377.	Sevin 85W, Sprayable Powder Insecticide
	8197	MOL	378.	Vegedex Granular Selective Herbicide
	8211	MBY	379.	Tropotox Plus-64 MCPB/MCPA Sodium Salts
	8223	BAZ	380.	Basfapon contains Spray Dried Wettable Dalapon

	8241	LIE	381.	Tim-Ber-Lox Fungicided Wood Preservative
	8253	DOW	382.	MCPA Sodium Salt 48 Farm Weedkiller Solution
	8279	TUC	383.	Barnfly Spray Residual Concentrate
	8287	DUQ	384.	Du Pont Lorox Linuron Weed Killer
PLG	8289	HOO	385.	Pentac WP Miticide
	8325	CHP	386.	Kelthane 3% Dust Miticide
	8342	CHP	387.	Thiodan 3% Dust
	8349	CHP	388.	Chipman I.F. Dual Purpose Seed Treatment
CHH	8350	CHG	389.	Dexon - Terraclor 5-5 Granular Soil Fungicide
CHH	8352	CHG	390.	Dexon 5% Granular Soil Fungicide
	8354	KIN	391.	King Fruit Tree Spray Powder Insecticide Fungicide
	8370	SHL	392.	Vapona Insecticide Livestock Spray
	8371	FIS	393.	Fisons Rogor "40" Emulsifiable Liquid
	8373	ALS	394.	ACS Grass Killer (Sodium TCA 94%)
	8393	STF	396.	Tillam 7.2E Selective Herbicide
	8401	DOW	397.	Dairy Barn and Livestock Spray Insecticide
	8404	DOO	398.	C.C.C. Pentol- 5% Technical Pentachlorophenol
	8406	DOO	399.	C.C.C. Cresosote Oil - 97%
	8418	WHL	400.	Cresanol - 20 Tar acid Disinfectant
	8419	LAT	401.	Later's Pyrethrum Emulsifiable Concentrate
	8443	CHP	402.	Chipman Maneb-Endosulfan Dust Insecticide-Fungicide
	8445	ABE	403.	Waco .5% Lindane Residual Solution
CBU	8451	USB	404.	Monobor-Chlorate Granular Weed & Grass Killer
	8455	NIB	405.	Gardenall Garden Dust-Kills Insects, Controls Diseases
	8466	MBE	406.	Marquette Insecticide et Fongicide
	8469	INT	407.	Co-op Liquid Lawn Weed Killer
	8480	INT	408.	Co-op Malathion Insect Spray
	8491	UAF	409.	"Summit" 2,4-D Amine 80 oz. Weed Killer
	8500	STF	410.	Captan 65 Seed Protectant
	8507	UAF	411.	"Summit" MCPA Amine 64 Weed Killer
	8509	UAF	412.	"Summit" MCPA Amine 80 oz. Weed Killer
	8525	INT	413.	Co-op Premium Lawn Weed Killer
	8535	CHP	414.	Chlorea 5 Granular Grass & Weed Killer
	8548	MBE	415.	Marquette Vapona Fly Bait
	8556	ROH	416.	Dithane M-45 Agricultural Fungicide
	8567	CYC	417.	Cygon 2-E Emulsifiable Concentrate Insecticide
	8570	NIB	418.	Polyram 80 W Fungicide
	8573	NAA	419.	Era Insecticide for Resistant Roaches
WAL	8580	WAK	420.	Watkins Fly Bait Containing Dichlorvos
	8582	FIS	421.	Hopper-Tox "64" Dimethoate Insecticide
	8584	GCP	422.	Green Cross DDVP Malathion Fly Killer
CHH	8588	CHG	423.	Morestan 25% Wettable Powder
	8592	GEN	424.	Cuproid No. 3, Wood Preservative
	8593	MBY	425.	Super Compitox Liquid Lawn Weedkiller
	8595	MBY	426.	Compitox Plus Mecoprop/2,4-D Liquid Weedkiller
	8600	GEN	427.	Cuproid No. 2, Wood Preservative
	8620	BAT	428.	Bartlett Methoxychlor 50% W.P. Insecticide
	8624	ABE	429.	Waco 500M Malathion Emulsifiable Concentrate
	8643	BRG	430.	Fairview Weed Cop MCPA Amine 80 Weed Killer
	8644	TUC	431.	Flymore Premium Fly Spray
	8652	CHD	432.	Pol-Kap Grease - Wood Preservative
	8660	BIE	433.	Bikoe Diazinon Residual Insect Spray
	8678	WIL	434.	Wilson's Prolin Rat and Mouse Killer
	8699	WIL	435.	Wilson's Prolin Concentrate
	8701	ROH	436.	Stan F-34 Post-Emergence Herbicide
	8746	TUC	437.	Botran 50W Fungicide contains Dichloran
GIE	8751	PLA	438.	Dairy-eez Formula 3, Vapona Animal Spray
CHH	8768	CHG	439.	Baygon 2% Roach Bait Insecticide
CHH	8770	CHG	440.	Baygon Spray Concentrate Insecticide
	8772	TUC	441.	Botran 75W Fungicide contains Dichloran
	8775	PLG	442.	Plant-Fume Smoke Fumigator contains Dichlorvos
	8781	SHL	443.	Vapona Insecticide Fogging Solution
	8791	STD	444.	Stan-Gard Penta Read-to-Use Wood Preservative

	8793	NIB	445.	Liquid Wonder Weeder for Duluxe Lawns
	8798	SIO	446.	Cross Country Malathion 50 Spray Insecticide
	8799	STD	447.	Stan-Gard Penta WR Concentrate 4-1
	8800	SIO	448.	Cross Country Chickweed & Clover Killer
	8801	STD	449.	Stan-Gard WR Read-to-Use Wood Preservative
CBU	8804	USB	450.	Tim-Bor A Soluble Powder
CHH	8808	CHG	451.	Dyrene Lawn Fungicide WP
	8810	NIB	452.	Amsol 96 Liquid Herbicide contains 2,4-D Amine
	8815	NIB	453.	Dormant Oil Spray containing Ethion
	8817	NIB	454.	Zineb 75 W Fungicide
	8819	CHP	455.	Chipman Slug Killer Pellets, contains Metaldehyde
	8827	NIB	456.	Kolo Fruit Spray contains Captan, Carbaryl, Tetradifon
	8836	PRP	457.	Pres-sure Ant & Roach Residual Spray
	8842	MBE	458.	Marquette Formaldehyde 37 Fungicide
	8845	RAW	459.	Rawleigh Dichlorvos Cattle & Barn Spray
	8849	RAW	460.	Rawleigh Dichlorvos Dry Fly Bait
CBU	8852	USB	461.	Monobor-Chlorate D Non-Selective Weed & Grass Killer
	8860	FIS	462.	Diazinon Garden Spray
AMI	8862	AMC	463.	Vegiben Liquid
AMI	8864	AMC	464.	Vegiben Granular Pre-emergent Herbicide
AMI	8871	AMC	465.	Amiben Granular
	8905	WEA	466.	Weedex Grass Killer - A Wettable Powder with Dalapon
	8911	NIB	467.	MCP 48 Sodium Salt Weedkiller
	8920	FRD	468.	Bricon Backrubber Insecticide Concentrate
	8923	GAP	469.	Gardo No. 34 Livestock and Barn Insecticide Spray
	8925	NIB	470.	Afolan Brand Linuron 50 W Weedkiller
	8933	GCP	471.	Green Cross Ammate X
CHH	8950	CHG	472.	Dylox Liquid Solution Ornamental Insecticide
	8961	MBY	473.	Agritox MCPA Potassium Salt Selective Weedkiller
DIA	8963	DIB	474.	Dacthol W-75 Selective Pre-Emergent Herbicide
	8971	LAT	475.	Later's Slug & Snail Killer
	8975	CHP	476.	Chipman Mecoprop Amine 64 Selective Weedkiller
	8983	LAT	477.	Later's Weedall contains Mecoprop and 2,4-D
VIR	8988	VIT	478.	Lethalaire G-68 Aerosol Insecticide
	8990	SHL	479.	25% Nemagon Granules Soil Fumigant
	8991	NIB	480.	Pyramin 80W Pyrazin Selective Herbicide
	8994	MCC	481.	McClelland"s Back Rubber Concentrate Contains Ronnel
	9001	SAL	482.	Dr. Salsbury's Sevin Pest Spray Wettable Powder
	9009	CHP	483.	Chipman MCPB Sodium plus MCPA Potassium
	9017	SHL	484.	Shell MCPA Weedkiller Sodium Salt 48
AMI	9025	AMC	485.	Amitrol Pressurized Spray
	9033	LAT	486.	Later's 2,4-d Amine 80 - Selective Weed Killer
	9034	Lat	487.	Later's 10% Methoxychlor Dust
	9055	STF	488.	Betasan 7 Granular Herbicide
	9057	STF	489.	Betasan 4-E Emulsifiable Herbicide
	9064	LAT	490.	Later's Premium Stock Spray
MCG	9075	ALR	491.	Thiram M Thiram-Mercury Turf Fungicide
	9082	DUQ	492.	Manzate D Maneb Fungicide
	9094	RIA	493.	Riess Prolin Rat Killer Concentrate
	9097	GAL	494.	Peak of the Market 3.5% Zineb Dust
NAG	9098	NOT	495.	Chew-Not Animal Repellent
	9099	GCP	496.	Green Cross Complete Potato and Vegetable Dust
	9103	WIL	497.	Wilson's Multi-Weeder, contains 2,4-D and Mecoprop
	9110	HOS	498.	10-10 Super Solignum Clear Wood Preservative
	9133	TUC	499.	Cowfly Spray and Backrubber Concentrate
	9150	NAC	500.	National Chemsearch Turf-Cide Insecticide
	9155	MBE	501.	Insecticide au D.D.V.P.
	9158	FIS	502.	Fisons Chlorobenzilate 50E
NAQ	9171	LAI	503.	Flomor Paraformaldehyde Pellets
	9172	GCP	504.	Green Cross Sevin 50 W Insecticide
	9177	CBE	505.	Canadian Tire Amine 40 2,4-D Liquid Weed Killer
	9178	INT	506.	Co-op MCPA Amine 80 Liquid WEed Killer
	9182	SHL	507.	Ciodrin 20 EMULSIBLE Concentrate Livestock Insecticide
	9183	RAL	508.	Purina Dairy Spray Special Ready to use Oil Base
	9184	ELA	509.	Greenfield Weed Preventer
			510.	

	9186	SHL	511.	Ciovap* Insecticide Livestock Spray
	9191	GCP	512.	Green Cross Mecoprop Liquid Herbicide
	9194	MEN	513.	Cristaux de Paradichlorobenzene 99% "Antimites"
	9195	INT	514.	Co-op Fly Granules (contains Dichlorvos)
	9197	INT	515.	Co-op Granular Soil Steritant, Weed & Grass Killer
	9199	INT	516.	Co-op Grass & Weed Killer Granular
	9207	LAT	517.	Later's Slug and Snail Killer Pellets
	9210	CHP	518.	Chipman Garden Fungicide Wettable Powder
NIB	9213	JUD	519.	Killer Kane Jet Weedkiller Powder Pellets
	9220	SIP	520.	Cross Country Slug and Snail Pellets
	9224	GRO	521.	"Orchard" Lime Sulphur Solution
	9232	NIB	522.	Mecoturf Plus 2,4-D Liquid Weedkiller
	9243	GRA	523.	Greenleaf Lime Sulphur Solution
	9245	NIB	524.	Systemic Cygon 2-E - Kills Garden Insects
	9256	MBY	525.	Plano-tox-80 2,4-D Amine Solution Selective Weedkiller
	9257	LEA	526.	Elanco Treflan E.C. A Selective Weedkiller
	9260	LAT	527.	Later's Premium Weed Killer
	9270	MBE	528.	Marquette MCPA Sodium Salt 48 Herbicide
	9274	MBE	529.	Marquette Fungicide and Insecticide Dust
	9284	CHP	530.	Methoxone Amine 80 MCPA Liquid Weedkiller
	9286	NAC	531.	Chemweed-265 Selective Weed Killer
	9290	CBL	532.	Cardel Livestock Spray
	9292	UNR	533.	Liquid Alanap Plus Weedkiller
	9294	DUQ	534.	Du Pont Tupersan Siduron Weed Killer
	9304	GCP	535.	Green Cross General Purpose Cattle Dust
	9311	NIB	536.	Ethion Superior Oil 70 Emulsifiable Insecticide
	9312	CHP	537.	Chipman Methoxychlor 50W Insecticide
	9318	LAT	538.	Later's Zineb 80 W.P. Fungicide
	9319	STF	539.	Captan 7.5 Dust Agricultural Fungicide
	9350	GCP	540.	Green Cross Killex Chickweed and Clover Killer
	9364	MAP	541.	Pre-San Emulsifiable Selective Herbicide
	9372	SAF	542.	Pro Vapo Fly Insecticide Strip
	9383	[illegible]	543.	Sanfax Roach n Ant Killer Liquid
HFC	9390	DFB	544.	Azak Selective Pre-Emergence Herbicide
	9391	MON	545.	M.P. Liquid Insecticide
	9393	GCP	546.	Green Cross Thiogreen W.P. Zineb 85% Wettable Powder
	9396	STF	547.	Zineb 75-W Agricultural Fungicide
	9399	CYC	548.	Abate 4E Emulsifiable Concentrate Insecticide
MCM	9400	CBR	549.	Formula GH-19 an Insecticide Fogging Solution
MCM	9401	CBR	550.	Formula GH-16 Insecticide Fogging Solution
MCM	9402	CBR	551.	Formula GH-18 Insecticide Fogging Solution
MCM	9405	CBR	552.	Formula GH-41 Fungicide Fogging Solution
CHH	9408	CHG	553.	Dylox-Meta-Systox-R Multi-Purpose Systemic Insecticide
	9418	FIS	554.	Diazinon 5% Granular Lawn and Garden Insect Killer
CHH	9419	CHG	555.	Neguvon Pour-On Cattle Insecticide
	9423	PLG	556.	Plant Fog Chlorobenzilate Thermal Fogging Solution
	9434	CHG	557.	Neguvon 80% Soluble Powder Animal Insecticide
	9436	CBR	558.	Formula GH-27 Insecticide Fogging Solution
MCM	9438	CBR	559.	Formula GH-33 Miticide Fogging Solution
	9441	CHP	560.	Chipman Zineb-Endosulfan Fungicide-Insecticide Dust
	9448	SHL	561.	Ciovop* Insecticide Back-Rubber Solution
	9457	CHP	562.	Weedrite Paraquat and Diquat Granules
	9459	SAN	563.	Sanfax Insecto Jet - Stream Killer
	9465	CHV	564.	Ortho Super Weed-B-Gon Spray
	9473	SHL	565.	Vapona Insecticide Scatter Bait
ELZ	9477	ECK	566.	Main Line Gopher Getter Bait
	9482	NIB	567.	Driveway Granular Weedkiller
	9484	JOH	568.	Raid Buggy Whip Residual Insecticide-Pressurized
	9491	GCP	569.	Green Cross Diazinon-Captan Seed Treatment
	9492	MBE	570.	Marquette Sevin 50% Insecticide Wettable Pow
	9494	MBE	571.	Marquette 40% Chlordane Emulsion Concentree
CHH	9498	CHG	572.	Morestan 2% Dust Miticide - Insecticide-Fungicide
	9509	GCP	573.	Tenoran 50% WP Herbicide
	9512	CHP	574.	Reglone A contains diquat, aquatic herbicide
	9513	WIL	575.	Wilson's 5% Chlordane Dust Insecticide
	9516	PFF	576.	Pfizer MCPA Amine 80 Liquid Farm Weed Killer
	9517	FIS	577.	Basudin 14G
	9520	DIT	578.	Diazinon 2D - 2% Dust for Cockroach Control
	9523	NIB	579.	Polyram 7 Dust Fungicide
	9528	DOW	580.	2,4-D Amine 80 Liquid Farm Weed Killer
	9535	RFC	581.	Penta-Phenol Paintable Wood Preservative

	9547	INT	582.	Co-op Fruit and Shrub W.P.
	9547	PFF	583.	Pfizer 2,4-D Amine 80 Liquid Farm Weed Killer
NIB	9552	JUD	584.	Killer Kane Kartridges for Broadleaf Weeds
DIA	9553	DIB	585.	Dacamine, A Liquid 2,4-D Weedkiller
	9554	LAT	586.	Later's Liquid Mecoprop Selective Weed Killer
	9555	PLG	587.	Plantco Miticide-Fungicide-Insecticide Dust
	9558	CHP	588.	Chipman Greenhouse Dust
	9578	MET	589.	Metasol Thiram-Mercury Turf Fungicide Powder
	9582	STF	590.	Captan 80-WP Fungicide
	9584	MAP	591.	Calo-Gran Brand Mercurial Fungicide
	9586	ALS	592.	ACS 74% Dalapon Grass Killer Soluble Powder
	9602	MOL	593.	Ramrod 65 Wettable Powder Weedkiller
	9603	GCP	594.	Green Cross Casoron Granular Herbicide
	9611	COK	595.	Pararoma Moth Killer Cake - paradichlorobenzene
	9613	LAT	596.	Later's Nemagon Emulsifiable Nematocide
	9614	LAT	597.	Later's 25% Nemagon Granular Nematocide
	9631	GCP	598.	Patoran 50% W.P. - Selective Herbicide
	9634	CHP	599.	Chipman Potato Seed Piece Dual Purpose Treatment Powder
	9636	NIB	600.	Pro-Turf Fungicide 50% W.P. contains Dyrene
	9640	CYC	601.	Abate 1-G Granular Insecticide
	9641	CYC	602.	Abate 2-G Granular Insecticide
	9642	CYC	603.	Abate 5-G Granular Insecticide
	9649	PLG	604.	Protexall Garden Dust Insecticide-Fungicide
	9656	INT	605.	Co-op Slug Bait contains Metaldhyde
	9660	STF	606.	Sevin 4 Flowable Insecticide
	9661	NIB	607.	Liquid Chlordane 40 Spray Insecticide
	9669	ROH	608.	Dithane M-22 Special W.P. Maneb Agricultural Fungicide
	9675	PIJ	609.	TCA Couch Grass Control Soluble Powder
	9691	STF	610.	Captan SP 4 Flowable Seed Protectant Agricultural Fungicide
	9695	INT	611.	Co-op Water Soluble Rat and Mouse Killer contains Warfarin
	9701	LAT	612.	Later's Rose Dust - Insecticide-Fungicide
	9705	LAT	613.	Later's Bulb Planting Dust with Chlordane and Captan
	9707	LAT	614.	Later's Golden Garden Dust - Combination Insecticide-Fungicide
	9712	DIT	615.	Warfarin Powder Concentrate
	9717	PLG	616.	Protexall Garden Spray
	9721	PLG	617.	Plantco 7.5% Captan Greenhouse Fungicide Dust
	9726	CHV	618.	Isotox Insecticide-Miticide Garden Spray
	9727	PLG	619.	Plantco 3.9% Zineb Greenhouse Fungicide Dust
	9737	NIB	620.	Pomogreen Liquid Rose Spray
	9738	STF	621.	Imidan 50-WP Insecticide
	9746	NIB	622.	Onion Maggot Killer Granular Insecticide-Fungicide
	9750	ABE	623.	46% Chlordane Emulsifiable Concentrate Insecticide
	9751	GCP	624.	Garden-Tox Insect Spray
	9755	CGC	625.	Garden - Tox Lawn and Garden Insect Control
	9759	SCO	626.	Ratox 0.5% Appat a la Warfarine concentree 0.5%
	9762	NIB	627.	Polyram-Diazinon Dust Fungicide-Insecticide
	9765	CHP	628.	Chipman Captan-Methoxychlor 75-3 Seed Protectant
	9772	INT	629.	Co-op Warble Killer (Ruelene 25E)
	9774	REC	630.	Record's Cresozene (contains 17% Cresylic Acid)
	9777	NAL	631.	2,4-D Amine Liquid Weed Killer
	9800	MBE	632.	Primo Livestock Spray Insecticide
	9801	WIL	633.	Wilson's 2E Liquid Systemic Insecticide
	9806	MBE	634.	Marquette Granular Insecticide-Fungicide
	9809	NIB	635.	Ant and Grub Killer
	9811	GCP	636.	Killex Turf Herbicide Liquid (Double Strength)
	9812	SAN	637.	Super Sanfax Insecticide Concentrate
	9818	NIB	638.	Non-Mercury Seed Protectant Fungicide Powder
	9821	LAT	639.	Later's Industrial 3% Chlordane Insect Spray
	9823	LAT	640.	Later's Dodine 65W Fungicide
	9824	ABE	641.	Waco 65-20 Mal-Thane Fogging Oil Concentrate
CHH	9827	CHG	642.	Dylox 80% Soluble Powder Insecticide
DIA	9832	DIB	643.	Daconil 2787 Fungicide W.P. for Turf

	9840	DOW	644.	Dow Sodium TCA Inhibited Grass and Conifer Killer Pellets
	9842	PLG	645.	Plantco Ornamental Miticide
SHH	9851	SUM	646.	Flora-Fog Vapona Greenhouse Fogging Solution Insecticide
	9853	DOW	647.	MCPA Amine 80 Liquid Farm Weed Killer
	9855	RIL	648.	Richardson's Bedbug Spray contains Lindane
	9858	PFF	649.	Pfizer MCPA Sodium 48 Liquid Weed Kill
	9863	NIB	650.	Patoran 50W Wettable Powder A Selective Herbicide
SHH	9874	SUM	651.	Flora-Fog Pentac Greenhouse Miticide Fogging Solution
	9876	VEL	652.	Velsicol Chlordane 25% Granular Soil Insecticide
	9878	GCP	653.	Green Cross 25% Chlordane Granular Insecticide
	9880	SHL	654.	Vapona Insect Ministrip
	9888	CHV	655.	Ortho Bug-Geta 3% Metaldehyde Pellets
	9892	MBE	656.	Marquette MCPA Liquid Weedkiller Amine 80
	9898	INT	657.	Co-op Ciodrin-Vapona Livestock Spray for Fly Control
	9899	INT	658.	Co-op Ciodrin-Vapona Backrubber Solution Insecticide
	9900	KEM	659.	Riddex 200 Fogging Insecticide Solution
AMI	9901	AMC	660.	Amchem Weedone Pre-Emergence Crabgrass Control Liquid
AMI	9903	AMC	661.	Super-D Liquid Weedone
	9905	ALS	662.	ACS Grass Killer (Sodium TCA 90%) Granular
AMI	9906	AMC	663.	ACP Grass Killer (Sodium TCA 90%) Pellets
AMI	9909	AMC	664.	Liquid Amizine A General Weedkiller
	9910	SHL	665.	Gardona Insecticide 75% Wettable Powder
	9911	SHL	666.	Gardona Insecticide 20 Emulsible Concentrate
	9917	CHP	667.	Chipman Livestock Spray Insecticide
	9920	KEM	668.	Riddex Malathion 50 Emulsifiable Concentrate Insecticide
	9921	STF	669.	Eptam 2.3 Granular For Weed Control
	9922	STF	670.	Captan 4 Flowable, an Aqueous Suspension
	9927	STF	671.	Vernam 7.2-E Selective Pre-Plant Herbicide
	9933	CHD	672.	Permatox 100 Liquid Fungicide Concentrate
	9936	HOL	673.	Holcomb Inserid-100 Residual Insecticide
	9946	SAF	674.	Dyna-Fog M-L Liquid Insecticide Concentrate
	9955	ROH	675.	TOK E-25 Emulsifiable Concentrate
	9958	INT	676.	Co-op Garden Maggot Killer Granules
	9959	SAM	677.	Lauren-Sect Insecticide a betail
	9963	DIT	678.	Chlordane 40E Emulsifiable Liquid Insecticide
	9975	DIT	679.	Malathion 50E Emulsifiable Liquid Insecticide
	9976	NIB	680.	Dalapon 12.5 Granular Herbicide
	9977	GCP	681.	Green Cross Weed-No-More Liquid Weed Killer
	9978	GCP	682.	Green Cross Maggot Killer Granular Insecticide
	9982	SHL	683.	Ravap Insecticide Emulsible Concentrate
	9983	NIB	684.	Granular Garden Weed Preventer
	9986	GCP	685.	Green Cross Fruit Tree and Garden Spray or Dust
	9987	PLG	686.	Plant Fog D.D.V.P. Thermal Fogging Solution
	9989	GCP	687.	Green Cross Liquid Crab Grass Killer
	9990	MBE	688.	Marquette Ammate-X Herbicide
	9995	SHL	689.	Vapona Insecticide Industrial Fogging Solution
	9997	LEW	690.	Cattle Grub Spray Liquid Concentrate
	10001	NIB	691.	Silvisar 510 Liquid Tree Killer
	10002	GCP	692.	Green Cross Siaprit Potato Fungicide Wettable Powder
	10003	GCP	693.	Green Cross 75% Captan - 3% Methoxychlor
	10014	GER	694.	Mercaptan Protectors for Livestock
	10019	STF	695.	Sutan 7.2 E Selective Herbicide
	10020	CHV	696.	Ortho Lawn Liquid Weed Killer
	10023	WIL	697.	Wilson's Weed Preventer Granules
	10024	KVL	698.	Malathion 50E Emulsifiable Liquid Insecticide
	10038	GCP	699.	Green Cross Cygon 2E Emulsifiable Concentrate
	10046	COQ	700.	Cooper Kilathion 50% Malathion Insecticide
	10051	COQ	701.	Cooper Sugar Bait Fly Killer Granular
	10061	DIT	702.	Sulfarin Rodenticide Powder Concentrate
	10066	IMP	703.	Esso MCPA Amine-80 Liquid Weedkiller
	10068	IMP	704.	Esso 2,4-D Amine-80 Liquid Weedkiller

	10071	ELA	705.	Balan E.C. Bethrodine a Selective Weedkiller
	10077	NIB	706.	Liquid Slug Killer Contains Metaldehyde
	10083	PLG	707.	Plantco Pre-Emergent Granular Crabgrass Killer
	10085	TUC	708.	Tuco Enide 50W Diphenamid
	10087	STD	709.	Stan-Chem Selective Herbicide 10% Chloropropham
MCC	10091	KEL	710.	Hay Savor Liquid Preservative for Hay
	10095	SHL	711.	Shell Flea Collar for Dogs contains Dichlorvos
AMI	10096	AMC	712.	Weedone Poison Ivy Killer Liquid
AMI	10099	AMC	713.	Liquid X-ALL General Weed Killer
	10106	GAP	714.	GArdo No. 43 Divos Livestock Spray
	10107	GAP	715.	Gardo No. 42 Dicyn Livestock Spray Insecticide
	10110	SHL	716.	3% Ciodrin Insecticide Livestock Dusting Powder
	10130	GCP	717.	Green Cross Potato Seed-Piece Dust
	10131	KIN	718.	King Bug Killer Fly Spray containing Dichlorvos
	10132	VAR	719.	Guardsman Malthion 50 E.C. Insecticide
	10134	SAF	720.	Vamfog Insecticide Fogging Solution
	10136	REC	721.	Record's Avenger Formula 4K Liquid
	10150	KEM	722.	Riddex DDVP - 5 Industrial Fogging Insecticide Solution
	10165	SAF	723.	1% Diazinon Insecticide Solution
	10166	GCP	724.	Green Cross 2,4-D Amine 96 Weedkiller
	10174	KEM	725.	Riddex 65-20 Fogging Insecticide Concentrate
AMI	10176	AMC	726.	Weedone Garden Weeder Granular
	10178	STF	727.	Ro-Neet 7.2E Selective Pre-Plant Herbicide
	10179	STF	728.	Ro-Neet 10 Granular Selective Pre-Plant Herbicide
	10183	BAT	729.	Bartlett Dimethoate 40% Emulsifiable Insecticide
	10184	OLH	730.	Ochemco 2,4-D Liquid Weed Killer Amine 80
	10186	KOH	731.	Dithane M-45 Mancozeb Potato Seed-Piece Fungicide Dust
	10188	FAV	732.	Scular Anti-Flea Collar
	10226	LAT	733.	Later's Terrachlor 20% Dust - Fungicide
CHH	10233	CHG	734.	Baygon Liquid Concentrate Insecticide
	10241	ABE	735.	Waco 25% Methoxychlor Emulsifiable Concentrate
	10243	PLG	736.	Plantco Fungicide Dust
	10245	CHP	737.	Chlorea D. Granular Grass and Weed Killer
	10246	SHL	738.	1% Vapona Insecticide Dust
MCM	10253	CBR	739.	Carmel Formula MU-8 an Insecticide Fogging Solution
	10256	CHV	740.	Ortho Triox Granular Vegetation Killer
	10258	SAN	741.	Sanfax WK - 245 Emulsifiable Liquid
	10275	LEG	742.	Lepage's Water Repellent Wood Preservative
MCC	10279	FAR	743.	Farnam Cy-Ban Ciodrin Insecticide
	10292	DIT	744.	Pyratex RSC (Roach Spray Concentrate)
	10294	NIB	745.	Granular Diazinon Maggot Killer for Vegetables
	10299	CBR	746.	B.P. -977 Emulsifiable Concentrate
	10304	WIL	747.	Wilson's Slug Bait Pellets contains Methaldehyde
	10305	PFF	748.	Agri-mycin 17 Agricultural Streptomycin
	10307	HIL	749.	Hilo Kennel Spray contains Chlordane Insecticide
	10308	MOL	750.	Avadex BW Granular Wild Oat Killer
	10310	INT	751.	Co-op Stock fly Powder
	10314	NIB	752.	Tree and Shrub Spray Liquid Insecticide
	10317	INV	753.	Preservatif Pour bois 5G-14 Velva-Glo Clear
	10319	COP	754.	Federee Preservatif pour bois, G - 14, 5% Clair
	10320	LAV	755.	Laurentide Preservatif pour bois, clair G - 14
	10325	GCP	756.	Green Cross Killex Spot Weeder Pressurized Spray
	10326	UNR	757.	Omite 30W Wettable Powder Miticide
	10327	CHV	758.	Ortho Granular Weed Preventer with Trifluralin
BAU	10329	GAH	759.	"Arnold" Multi-Purpose Spray Cartridge
	10333	HIL	760.	Hilo Kiltix Emulsifiable Concentrate
	10336	MBE	761.	Cygon 2-E Emulsifiable Concentrate
	10337	CHP	762.	Cygon 2E Emulsifiable Concentrate
	10338	CHP	763.	Agrox N.M Drill Box Non-Mercurial Seed Treatment
	10344	CHV	764.	Ortho Scram Dog Repellent Bomb

	10347	CHP	765.	Eptam Weed Preventer Granular
	10353	MBE	766.	Marquette Dalapon Herbicide
	10356	PLG	767.	Plant Fog Pentac Miticide Fogging Solution
DIA	10358	DIB	768.	Termil Fungicide
	10362	MBE	769.	Marquette Fungicide Captan 50
	10366	PEQ	770.	Pes-San Roach and Ant Destroyer Solution contains Chlordane
NIB	10370	JUD	771.	Pill Kill Weed Killer
	10376	VIN	772.	Vio Bin Black Farm Disinfectant Tar Acid Type
	10379	SHL	773.	Vapona Insecticide No-Pest Aerosol
	10380	GCP	774.	Liquid Livestock Insecticide Spray
MCM	10385	CBR	775.	Formula F-6 Emulsifiable Spray Insecticide
	10387	INT	776.	Co-op Sevin 50 Wettable Powder Insecticide
	10395	REC	777.	Record's Formula G Liquid Insect Spray
	10397	PFF	778.	Calsa Methoxychlor 15% Emulsifiable Concentrate
	10399	PLG	779.	Hormono 80 Weedkiller Liquid - contains 2,4-D Amine
	10400	REC	780.	Record's Formula 2G - Liquid Insect Spray
AMI	10401	AMC	781.	Weedar MCPA Amine 80 Liquid Herbicide
FER	10404	HYD	782.	Dogonex Dog Repellent Outdoor Pressurized Spray
	10410	KEM	783.	Dyco Residual Insecticide Solution
	10413	NIB	784.	Tandex 4 Granular Herbicide
	10414	STF	785.	Sutan-Atrazine 36-12 WP
	10416	INT	786.	Co-op Potato Seed-Piece 8% Fungicide Dust
	10417	KEM	787.	Rid-Weed Brush and Weed Killer Liquid
	10419	MEC	788.	Mertect 160 Thiabendazole Wettable Powder Fungicide
MCM	10427	CBR	789.	Formula MU-14 - An Insecticide Fogging Solution
MCM	10428	CBR	790.	Formula MU-15 An Insecticide Fogging Oil
MCM	10429	CBR	791.	Formula MU-16 An Insecticide Fogging Solution
MCM	10431	CBR	792.	Formula MU-17 Insecticide Fogging Oil Concentrate
MCM	10432	CBR	793.	Formula MU-20 Emulsifiable Concentrate
NIB	10437	JUD	794.	Fogger Fuel for Outdoor Insect Control
MCM	10445	CBR	795.	Formula MU-30 Insecticide Fogging Solution
	10446	DUQ	796.	Du Pont Londax G Weed Killer
	10447	DUQ	797.	Du Pont Londax Weed Killer
	10448	WIL	798.	Wilson's Pressurized Repell - Dog Repellent
	10450	DAL	799.	Flair Shampoo for Dogs and Cats
	10451	MTC	800.	M. T. C. Pet Shampoo
	10452	NIB	801.	Afolan Brand Linuron 7.5 Granular Herbicide
	10454	PLG	802.	Plantco Sesone Weed Preventer contains Disul (Sodium)
	10455	VAR	803.	Guardsman Dimethoate 40 Emulsifiable Concentrate
	10460	NIB	804.	Liquid Clearit Vegetation Killer with Tandex
	10465	PLG	805.	Plantco Sodium TCA Inhibited Pellets
	10470	GCP	806.	Green Cross Glyodex 37-22 W.P. Fungicide
	10474	CAX	807.	Nata (Sodium TCA) Herbicide
	10481	GCP	808.	Green Cross 25% Methoxychlor Insecticide
	10482	GCP	809.	Green Cross 15% Methoxychlor Insecticide Liquid
AMI	10483	AMC	810.	Weedar MCPA Sodium Salt 48 Liquid Herbicide
	10486	CYC	811.	Abate 5 C Capsules for Mosquitoe Larvae Control
	10488	GCP	812.	Green Cross Tomato and Potato Dust
	10492	GCP	813.	Green Cross Alanap - 3 Liquid Herbicide
	10495	KOH	814.	Dikar Fungicide-Miticide Wettable Powder
	10500	KOH	815.	TOK WP 50 Selective Post Emergent Herbicide
	10511	NOX	816.	Noxall Dawgone Dog Repellent Dust
AMI	10513	AMC	817.	Amchem Ornamental Granular Weeder
	10515	ABE	818.	Waco 15% Methoxychlor Insecticide Solution
	10526	DUQ	819.	Du Pont Manzate 200 Mancozeb Fungicide
	10533	NAC	820.	National Chemscarch Veg-Out-Non-Selective Weedkiller
	10534	FLB	821.	Flintkote Wood Preservative Clear
	10537	NIB	822.	Phaltan 7 - Sevin 7 Dust Fungicide-Insecticide
	10546	NIB	823.	Fixed Copper Dust Fungicide

	10547	INL	824.	Thuricide 90 TS Microbial Insecticide
MCC	10556	FAR	825.	Farnam Stable-Spray Emulsifiable Fly-Killer
	10566	CHP	826.	Deecop Potato, Tomato and Vegetable Dust
	10571	GWA	827.	Shur-Kill Slug Pellets
	10577	GCP	828.	Green Cross Captan 50% W.P. Fungicide
	10579	CHP	829.	Chipman Ant & Grub Killer Dust
	10585	KEM	830.	Riddex DDVP-10 Industrial Fogging Insecticide Solution
	10588	SPA	831.	Spratt's E-ZEE Weed Liquid 2,4-D Amine
	10590	CHP	832.	Chipman Lawn Weedkiller
	10592	NIB	833.	White Latex Rodent Repellent
	10593	GCP	834.	Green Cross Slug Destroyer Pellets
	10594	SIO	835.	Cross Country Ant & Grub Killer Dust
	10598	LAT	836.	Later's Mouse & Gopher Foe
LEA	10599	HOY	837.	Prist Pressurized Liquid
LEA	10600	HOY	838.	Prist Liquid
	10601	SIO	839.	Cygon 2-E Emulsifiable Concentrate
	10602	INT	840.	Co-op Alfalfa Spray E.C. Insecticide
	10603	CHP	841.	Chipman Methoxychlor Spray
	10604	SIO	842.	Cross Country Grass and Weedkiller
	10605	CHP	843.	Imidan Fruit Tree Insecticide Wettable Powder
	10617	CHD	844.	Chapman Timpreg B. Pol-Nu Type Wood Preservative Grease
	10619	KVL	845.	Sevin Poultry & Livestock Wettable Insecticide
	10620	STF	846.	Sutan 5G A Selective Herbicide
	10621	STF	847.	Sutan 10G A Selective Herbicide
	10623	MCC	848.	McClelland Cattle Fly & House Powder
	10626	CHP	849.	Chipman Soil & Bulb Dust Insecticide-Fungicide
	10627	GCP	850.	Co-op Weed Ban Herbicide Granules
	10629	GCP	851.	Green Cross Granular Weed Preventer
	10631	PUG	952.	Creso-Phil Disinfectant
	10633	SAJ	853.	Sanitized (Brand) Van Interior Aerosol
	10634	DOW	854.	Chipman Ferbam 95 Wettable Powder Fungicide
	10636	DOW	855.	Dursban 2E Emulsifiable Insecticide
	10638	DIT	856.	Chlordane 40W Wettable Powder Insecticide
	10639	WIL	857.	Wilson's Garden Spray
	10643	INT	858.	Co-op Potato-Tomato Insecticide-Fungicide Dust
	10644	INT	859.	Co-op 5% Sevin 3.9% Zineb Insecticide-Fungicide Dust
	10650	CHP	860.	Chipman Livestock Bomb Pressurized Spray Insecticide
	10653	DIT	861.	Chlordane 5 D Dust Insecticide
	10654	DIT	862.	Malathion 25W Wettable Powder Insecticide
	10657	GCP	863.	Gardal Rose Spray 2.4% Phosphamidon
	10658	INT	864.	Co-op Ant, Grub & Cutworm Killer Granular Insecticide
	10663	FED	865.	Federal Non-Mercury Seed Protectant Polyram Fungicide
	10672	DOW	866.	Dursban T Emulsifiable Insecticide
	10674	BAT	867.	Bartlett 95% Ferbam Wettable Powder Agricultural Fungicide
	10675	WIL	868.	Wilson's Rose Dust
	10677	PLG	869.	Plant Fog Diazinon Thermal Fogging Insecticide-Miticide
DIE	10679	DID	870.	Therma-Groom Pet Shampoo for Dogs
DOL	10680	TRM	871.	Repel-a-Cide Shampoo for Dogs
	10681	GCP	872.	Green Cross Cutworm Dust or Spray
	10682	UNR	873.	Vitavax Wettable Powder Non-Mercurial Seed Protectant
	10687	WIL	874.	Wilson's Fruit Tree Spray or Dust
	10688	TUC	875.	Stokfly Residual Spray
MCC	10689	KEL	876.	Kemin Grain Savor Liquid
	10690	LAT	877.	Later's Methoxychlor 25% E.C. Insecticide
	10692	GCP	878.	Green Cross Insect Powder
	10700	MBE	879.	Marquette Insecticide & Fungicide
	10701	RIM	880.	Richcraft Brand Paintable Wood Preservative Rich-Pent
	10705	MBE	881.	Formisol Insecticide sous Pression
DIA	10708	DIB	882.	Dacthal G-5 Herbicide (5% Dacthal Granules)
	10710	KIN	883.	King 5% Sevin and 7% Copper Dust
	10711	KIN	884.	King Tomato, Potato & Vegetable Dust

	10712	CGC	885.	Fly Tox Insecticide Bloc
	10715	CHP	886.	Chipman Chlordane Spray Concentrate Insecticide
	10727	MBE	887.	35-15 Mal-Thox Fogging Oil Concentrate
	10728	MBE	888.	Marquette MAr-Cop 775 Insecticide et Fongicide
	10730	MBE	889.	Herbicide Herbitex
	10731	INT	890.	Co-op Sodium T.C.A. Grass Killer Pellets
	10734	LAT	891.	Later's Flower & Garden Insect Spray
	10736	DIT	892.	Warfarin SP. Soluble Powder Rodneticide
	10742	LAT	893.	Later's Gard-N-Aid Rose Spray Insecticide-Fungicide
	10743	LAT	894.	Later's Berry Spray Insecticide-Fungicide
AMI	10744	AMC	895.	Amchem Weedone Granular Pre-emergence Crabgrass Control
	10745	LAT	896.	Later's Potato and Tomato Dust Insecticide-Fungicide
	10749	MBE	897.	Marquette Insectex Poudre 10% Methoxychlore Insecticide
	10750	MBE	898.	Marquette Methoxychlore 20% Emulsion Concentree Insecticide
	10757	LAT	899.	Later's Crawling Insect Killer Residual Spray
	10758	LAT	900.	Later's Fruit Tree Spray Miticide-Insecticide
	10759	BAT	901.	Bartlett Malathion 5 E.C. Emulsifiable Insecticide
	10763	CRL	902.	Wood Preservative (contains pentachlorophenol)
	10765	CRL	903.	Res-N-Stain 8 Ready Mixed Colors
	10779	REC	904.	Mira-Sol Liquid Deodorizer
	10780	CHV	905.	Orthocide 80 Wettable Powder Fungicide
	10784	CER	906.	C-100 Non-Selective Weed Killer Liquid
	10787	REC	907.	Record's Formula 2G contains Methoxychlor
	10788	GAL	908.	Peak of the Market Slug Bait
	10789	INT	909.	Co-op 3.9% Zineb Fungicide Dust
	10792	BEN	910.	Moorwood Clear Penta Wood Preservative
	10793	TRO	911.	Trojan TRL-21 Residual Insecticide Spray
	10794	TRO	912.	Trojan TRL-160 Fogging Insecticide Concentrate
	10797	KOH	913.	TOK-RM Emulsifiable Concentrate
	10798	GAL	914.	Peak of the Market Manzate 8 Dust Potato Fungicide
	10805	GCP	915.	Green Cross Benazolin Liquid Herbicide
	10806	STF	916.	Betasan 12.5 Granular Selective Herbicide
	10807	CON	917.	Consolite Weed-O Grass & Weed Killer
	10815	DIT	918.	L-2 Fog Oil contains Lindane
	10817	OLH	919.	Ochemco MCPA Amine 80 Liquid Weed Killer
	10823	KEM	920.	Riddex B-P Residual Spray Insecticide
	10829	LAS	921.	Better Garden Liquid 2,4-D Weedkiller
AMI	10834	AMC	922.	Back Yard Clean-Up Liquid Amitrole Weedkiller
	10853	GCP	923.	Green Cross Liquid Vegetation Killer
CGC	10856	GUS	924.	Evershield CM Seed Protectant Suspension
	10866	SAF	925.	No. 5MX Fog Oil
	10869	BPC	926.	Propcorn Liquid Fungicide
	10871	MMC	927.	Sergeant's Cat Flea Powder
	10874	DOW	928.	Ruelene 12R Cattle Insecticide
	10876	CLL	929.	ChemStor Liquid Preservative
	10877	INT	930.	Co-op Cygon 2E'E.C.
	10884	CHV	931.	Ortho Diazinon Insect Spray
	10885	GCP	932.	Maloran 50% Selective Herbicide
	10891	TUC	933.	Barnfly Spray Residual Concentrate
GOO	10892	KEY	934.	Glowon Tree Killer
	10897	NIB	935.	Non-Mercury Liquid Polyram Seed Protectant Fungicide
	10898	CGC	936.	Spectracide Garden Spray
	10899	CGC	937.	Spectracide Lawn and Garden Insect Killer
	10911	CER	938.	Certified 55 Selective Broadleaf Weed Killer
	10912	NAC	939.	National Chemsearch Select-Trol
	10914	GCP	940.	Green Cross Garden and Fruit Tree Spray
	10915	PFF	941.	Calsa Mecoprop 48
	10916	PFF	942.	Calsa Mecoprop Plus 2,4-D 32-16
	10918	BIE	943.	Bikoe Lindane Residual Insect Spray
	10926	NPO	944.	Protox A/85 Preservatif Impermeable Pour le bois
	10927	INT	945.	Co-op Corn Seed Protectant Dust

SHY	10929	SCT	946.	Pro Turf Broad Spectrum Granular Weedicide
SHY	10930	SCT	947.	Kansel Granular Weed Control
ENL	10931	SUD	948.	Chaperone Rabbit and Deer Repellent
ENL	10933	SUD	949.	Chaperone Powder for use of Flea Kill bed or Catnap bed
	10936	DOW	950.	Plictran 50W Miticide
	10947	DOW	951.	DOw TCA Pellets Inhibited
	10949	GCP	952.	Green Cross One-Shot Poison Ivy Killer
	10951	PEN	953.	Pestroy Liquid Residual Insecticide
	10952	NIB	954.	Liquid Fruit Tree Spray Kills Insects & Controls Diseases
	10954	SCU	956.	Scott's Cure Dust
	10957	CBC	957.	Pyrethrum Liquid Dip for Control of Blowflies on Fish
	10959	UNR	958.	Pro-Gro Dust Systemic Seed Protectant
	10964	WIL	959.	Wilson's Evergreen Spray-Systemic Insecticide-Miticide
	10965	WIL	960.	Wilson's 50% Sevin Insecticide Wettable Powder
	10966	SIC	961.	Sico Incolore No. 774-104 Preservatif Hydrofuge
	10969	GCP	962.	Green Cross Estamine 80 Low Volatile Liquid Weedkiller
	10970	GCP	963.	Green Cross Estamine 80 2,4-D Low Volatile Liquid Weedkiller
	10971	NIB	964.	Liquid Wonder Weeder for Deluxe Lawns
	10973	NIB	965.	Weed Preventer Spray with Dacthal Wettable Powder
	10974	NIB	966.	Granular Weed Preventer with Dacthal
	10978	CGA	967.	Basudin 5G Granular Insecticide contains Diazinon
	10980	CGA	968.	Basudin 14 G Granular Insecticide
	10981	CGA	969.	Acaraben 50E Emulsifiable Insecticide
	10982	NIB	970.	Liquid Gardenall Spray Kills Insects and Controls Diseases
	10984	TUC	971.	Ciolac Insecticide Livestock Dust contains 3% Ciodrin
	10985	LAT	972.	Later's 1% Lindane Dust Insecticide
	10986	UNP	973.	Vitaflo Liquid Suspension Non Mercurial Seed Protectant
	10988	CGA	974.	Primatol A.P. 5:5 Brand of Atrazine and 2,4-D Granular
	10991	SHL	975.	Rabon Insecticide 75% Wettable Powder
	10992	DIT	976.	Chlordane 40S Oil Concentrate Insecticide
	10995	LAT	977.	Later's Animal Insect Powder contains Lindane
	10999	PAL	978.	Purina Insecticide Fogging Solution
	11000	PAL	979.	Purina Cattle Insecticide Dust
	11001	CDD	980.	CS-RA-I Liquid Selective Pre-Plant Herbicide
GIL	11002	SHL	981.	Borden Greens and Fairways Granular Crabgrass Preventer
	11003	GCP	982.	Green Cross Granular Vegetation Killer
	11005	CYC	983.	Cytrol Poison Ivy Killer
	11006	NIB	984.	Ethion 5 Plus Thiram 7.5 Granular Insecticide-Fungicide
	11015	CEL	985.	Boitin Stain Clear contains Pentachlorophenol
	11016	GCP	986.	Bramophos 25% Wettable Powder Insecticide
	11026	CGA	987.	Princep 4G Granular Herbicide of Simazine
	11027	BRH	988.	Bramco Manzate 8 Dust Potato Fungicide
	11028	VAR	989.	Guardsman Fungicide M Wettable Powder
	11031	LAT	990.	Later's Lawn Weedkiller Liquid 2,4-D Amine
	11034	PFP	991.	Sabithane 80-80% Maneb WP Agricultural Fungicide
	11036	MBE	992.	Marquette Larvex 5% Insecticide
	11037	MBE	993.	Marquette Martox Insecticide Spray
	11038	SAN	994.	Sanfax Dyna-Kill Concentrate Oil Soluble Insecticide
	11039	CHD	995.	Chapco S S C Concentrate Liquid Fungicide Concentrate
	11046	DIT	996.	Diazinon 1% Insecticide Solution
	11048	FEP	997.	FPC Liquid Lindane 1% Residual Insecticide
	11050	FIS	998.	Fisons Dursban 25E Emulsifiable Insecticide
	11051	LAT	999.	Later's 10% Manzate 200 Potato Seed Tuber Dust Fungicide
HED	11054	VIT	1000.	Lethalaire A-30
	11055	GCP	1001.	Green Cross Estamine Non-Volatile Brushkiller 80
	11061	DUQ	1002.	Tersan 1991 Turf Fungicide Wettable Powder
	11062	DUQ	1003.	Benlate Fungicide Wettable Powder for Ornamentals
	11066	NIB	1004.	Afesin 50W Herbicide Wettable Powder
	11067	NIB	1005.	Afesin 2 Herbicide Emulsifiable Concentrate
	11070	NOW	1006.	Tarcoate Pure Coal Tar Cresote
	11071	NOW	1007.	Tarcoate Pentasol Wood Preservative

	11072	SIO	1008.	Cross Country Weed Killer for Lawns
	11075	UNR	1009.	Systemic Non-Mercurial Vitaflo
	11076	SHL	1010.	Vapona/Malthion Insecticide Fogging Solution
	11077	SHL	1011.	Vapona/Malathion Insecticide Fogging Solution
	11080	TEC	1012.	Dynafog 99 Ready-To-Use Insecticide
	11084	SHA	1013.	Shamrock Malathion 50% E.C.
	11086	VEL	1014.	Velsicol MCPAK 64 Liquid Weed Killer
	11087	INT	1015.	Co-op MCPAK 64 Liquid Weed Killer
	11088	CHP	1016.	Mantox 80% Maneb W.P. Fungicide
	11089	INT	1017.	Co-op 75% Sodium Salt Soluble Powder Weed Killer
JOS	11091	MAC	1018.	Super D Weedone Foam Weed Killer
	11092	VEL	1019.	Warfarin Plus Sulfaquinozaline Concentrate Insecticide
	11093	VEL	1020.	Diphacin-110 Concentrate Rodenticide
	11094	VEL	1021.	Velsicol Warfarin Concentrate Rodenticide
	11095	VEL	1022.	Velsicol Pivacin Concentrate Rodenticide contains Pindone
	11096	LAT	1023.	Later's Sevin 50% W.P. Insecticide
DIA	11099	DIB	1024.	Bravo W 75% Wettable Powder Agricultural Fungicide
	11101	MEC	1025.	Wettable Powder Mertect 460 Thiabendazole Fungicide
	11104	STE	1026.	Stan Chem Mancozeb Potato Seed Piece Fungicide Dust
BRE	11107	GUL	1027.	Outfox Gulf Oil Corp. Emulsifiable Liquid Corn Herbicide
	11110	TUC	1028.	Bin Treat contains Malathion
JOS	11111	AMC	1029.	Amiben Ester Emulsifiable Liquid Herbicide
	11113	OLH	1030.	Ochemo 2,4-D Liquid Weed Killer Amine 96
	11115	UAJ	1031.	Sevin 4 Oil
	11125	RIL	1032.	Richardson's Malathion 50E Outdoor Spray Concentrate
	11130	OLH	1033.	Ochemco Malathion 50E.C.
	11131	RIL	1034.	Richardson's 1% Diazinon Household Insecticide
MCC	11132	FAR	1035.	Farnam Super Die-Fly Sugar-Base Fly Spray
	11134	DAC	1036.	Daco Electric Fogger Premium Fly Spray
	11135	INT	1037.	Co-op New Ready-To-Use Warble Killer
	11141	NAC	1038.	National Chemsearch P-O-W Wasp Spray
	11143	GCP	1039.	Green Cross DDVP Fly Killer for use as a Bait
	11145	RIL	1040.	Richardson's Chlor 40-Soil-Turf Insecticide
	11147	SAF	1041.	Sanex 0.5% Lindane (Residual Insecticide)
	11149	JOH	1042.	OFF! concentrate Insect Repellent Solution
	11151	DOO	1043.	Domtar Creoserve Wood Preservative
	11152	DOO	1044.	Domtar No. 1 Cresote Oil Wood Preservative
	11155	BOY	1045.	5% Methoxychlor in Oil Residual Spray
MCC	11156	FAR	1046.	Farnam Ready-to-Use Stable and Horse Fly Spray Solution
	11158	REP	1047.	FPC 1% Diazinon Liquid
	11159	KEM	1048.	Riddex C-2 Residual Insecticide
	11163	RAL	1049.	Purina Wound Protector-Livestock Bomb Insecticide
MCC	11167	THU	1050.	Starbar Golden Malrin Sugar Bait
DIC	11168	DIB	1051.	Exotherm Termil A Special Fungicide Powder
	11174	CHP	1052.	Betasan Crabgrass Preventer contains Bensulide
	11175	GCP	1053.	Green Cross Fly Killer Spray Concentrate Containing Trichlorfon
	11178	KEM	1054.	Riddex M/X/L Fogging Insecticide
	11181	GCP	1055.	Green Cross Drillbox DCL Powder
	11182	COS	1056.	Weed Out Pressurized Foam for Lawns contains 2,4-D and Mecoprop
	11186	NIB	1057.	Cyprex 65-W contains Dodine Fungicide Powder
	11188	GCP	1058.	Green Cross Livestock Insecticide Powder contains Ciodrin
	11197	NIB	1059.	Maneb 80-W Fungicide Wettable Powder
	11198	LAT	1060.	Later's Couch (Quack) Grass Killer with TCA Water Soluble Pellets
	11199	DIT	1061.	Mouse seed Rodenticide Bait contains Strychnine
	11200	CHV	1062.	Ortho Brush Killer A
	11202	NIB	1063.	Liquid Multispray Insecticide with Diazinon
	11203	TUC	1064.	Flybon Insecticide 75% Wettable Powder Residual Barn Spray
	11208	MBE	1065.	Solnet un Herbicide contenant du Chlorthal
	11213	CHP	1066.	Chipman Ant and Grub Killer Granular contains Chlordane
	11214	CHP	1067.	Dutox Systemic Insect Killer
	11220	GCP	1068.	Green Cross Livestock Insecticide Pressurized Spray

	11221	NIB	1069.	Captan 50W Fungicide Wettable Powder
	11222	NAC	1070.	National Chemsearch Fenocil Weed Killer
	11226	DIT	1071.	Sulfamate-80 Herbicide Concentrate
	11228	NIB	1072.	Methoxychlor 5% Solution Insecticide
	11229	DIT	1073.	Malathion 50S Oil Concentrate Insecticide
	11230	DIT	1074.	Chlordane 25G Granular Insecticide
	11231	DIT	1075.	Chlordane 5G - Granular Insecticide
	11232	MBE	1076.	Steril (destructeur de Vegetation, contient Ammonium Sulfamate)
	11234	NAP	1077.	Betanal Emulsifiable Post-Emergence Herbicide
	11235	GRE	1078.	Green Valley Maneb 80 WP Fungicide
	11236	CHV	1079.	Ortho Weed-B-Gon Jet Weeder (Pressurized)
	11239	CHV	1080.	Ortho Cygon 2E Insecticide contains Dimethoate
	11240	CHV	1081.	Ortho Fruit and Vegetable Insect Control
	11241	INT	1082.	Co-op Spot Weed Killer contains 2,4-D Amine and Mecoprop
	11242	INT	1083.	Pool Brand 2,4-D Amine 80 Liquid Weed Killer
	11243	INT	1084.	Pool Brand MCPA Sodium Salt 48 Liquid Weed Killer
	11247	INT	1085.	Pool Brand MCPA Amine 80 Liquid Weed Killer
	11249	CHV	1086.	Ortho Rose and FLoral Dust
	11251	DUQ	1087.	Lorox G. Lunuron Herbicide
ABC	11252	ABB	1088.	Dipel Bacillus Thuringiensis var. alesti W.P.
	11253	OLN	1089.	Oliver Maneb 80 W Wettable Powder Fungicide
	11254	PFF	1090.	Pfizer Dalapon Grass Killer
	11255	DIT	1091.	Bromacil-16 Liquid Weedkiller Concentrate
	11256	FIS	1092.	Fisons FI-Fly Contains Trichlorfon
	11262	LAT	1093.	Later's Beef Tick and Grub Control WP
WER	11265	KEL	1094.	Mold Curb Liquid Containing Propionic Acid
WER	11266	KEL	1095.	Mold Curb Dry Powder containing Propionic Acid
	11267	LAT	1096.	Later's Algaecide-with Copper Sulfate Soluble Granules
	11268	KIN	1097.	King 15% Zinch Mushroom Dust
	11269	SUP	1098.	Supersweet Fly Bait contains Dichlorvos
	11270	SHL	1099.	Vapona No-Pest Insecticide Aerosol contaons Dichlorvos
	11272	CHV	1100.	Ortho Spot Weed and Grass Killer (Pressurized)
	11273	CHP	1101.	Chipman Mecroprop + 2,4-D Weedkiller Liquid
JOS	11275	AMC	1102.	Fanavar Liquid General Weed Killer
JOS	11276	AMC	1103.	Amilon WP Pre-Emergence Weedkiller
	11279	CHV	1104.	Ortho Diazinon Soil and Foliage Dust
CHH	11281	CHG	1105.	Dylox U-L-V Spray Insecticide Contains Trichlorfon
	11282	CGA	1106.	Primatol AP 5:5 Atrazine +2,4-D Amine Granular Herbicide
	11284	STF	1107.	Eptam 8-E Selective Herbicide-Emulsifiable Concentrate
	11287	NIB	1108.	Dimethoate 4-E Insecticide Emulsifiable Concentrate
	11289	STF	1109.	Eptam 10:G Granular Selective Herbicide
	11291	MEC	1110.	Mertect 360 Thiabendazole Fungicide
	11299	DOW	1111.	Dow Contact Weedkiller Emulsifiable Concentrate
	11300	CHP	1112.	Weedrite Aerosol Weed and Grass Killer contains Paraquat
JOS	11301	AMC	1113.	Emulsavert - D An Invert Emulsion Formulation of 2,4-D
	11302	INL	1114.	Thurcide HPC contains Bacillus Thuringiensis
	11308	CHP	1115.	Chipman Therma-Fog M-L Solution
CHH	11313	CHG	1117.	Baygon OSC Insecticide
	11314	KEM	1118.	Riddex Mal-Fog 55 Fogging Insecticide Concentrate
	11315	DOW	1119.	Dursban 25W Wettable Powder Insecticide
	11316	KEM	1120.	Riddex M/X/L-25 Fogging Insecticide Concentrate
	11321	CHP	1121.	Herbitox MCPA Liquid Weedkiller from Potassium Salt of MCPA
	11323	SHL	1122.	SL17731 Liquid Wild Oat Herbicide (contains Fenzolyprop)
	11325	AEF	1123.	Durable Cedar Moth Proofer (Pressurized)
	11326	WOB	1124.	Residual Insecticide Liquid
	11329	INT	1125.	Pool N.M. Drill Box Seed Treatment Powder contains Maneb
AMI	11337	AMC	1126.	Emulsamine E-3 Liquid Herbicide
	11340	VAR	1127.	Guardsman Maneb-Thiodan Dust
	11341	MBY	1128.	Asulox Asulam Sodium Salt, Liquid Selective Weedkiller
DIT	11342	CHM	1129.	Rozol .28% Mineral Oil Concentrate (for mfg. and PCO)

KEM	11343	CHM	1130.	Rozol Rodenticide 0.1% Dry Concentrate (for mfg. and PCO)
	11357	SUP	1131.	Supersweet Fly Bait contains Dichlorvos and Ronnel
	11358	INT	1132.	Co-op Chlordane 40% Emulsifiable Concentrate Insecticide
	11359	SAN	1133.	Sanfax 473 EC Insecticide
	11363	SAG	1134.	Sanex 10% Chlordane Emulsifiable Concentrate
	11364	SAG	1135.	Sanex 40% Chlordane Emulsifiable Concentrate
	11365	SAG	1136.	Sanex Vapo Fog Liquid Insecticide
	11368	LAL	1137.	Lalco Moth Proofer (pressurized)
	11369	ALS	1138.	Alsi Moth Proofer (pressurized)
MCC	11372	TIR	1139.	Starbar Golden Malrin Liquid
	11374	KEM	1140.	Riddex Chlordane 40 Emulsifiable Concentrate Insecticide
	11375	FAP	1141.	Familex Pressurized Spray Fly Gas Bouille sous pression
	11376	JIT	1142.	Jito Jitogas Aerosol Insecticide
	11380	MEF	1143.	Marquette Insectex Poudre Insecticide Contient 5% Chlordane
	11382	MBF	1144.	Marquette Prolin in Pellets Kills Rats and Mice
	11385	SYD	1145.	Industrial Formulation of Diazinon Insecticide
	11389	OLS	1146.	Ochemco NM Single Drill Box Seed Treatmnet Powder
	11391	OLS	1147.	Ochemco NM Dual Purpose Drill Box Seed Taeatment Powder
	11396	ROH	1148.	KERB - 50W Selective Herbicide Wettable Powder
MCC	11397	TIR	1149.	Starbar Grubex
LEI	11399	MOR	1150.	Purocide Mosquito Adulticiding Concentrate
	11400	DEC	1151.	Decco Apple Coating WT-56 with Fungicide Thiabendazole
	11410	NIB	1152.	Pomegreen Rose and Flower Fungicide Wettable Powder
	11413	STF	1153.	Imidan 50 WP Garden & Home Insecticide
	11414	NIB	1154.	Pomogreen Rose & Flower Dust
	11415	NIB	1155.	Tree and Shrub Dust
	11418	BAY	1156.	Boxcol Insecticide a Vaporiser contient Diazinon
	11420	INT	1157.	Co-op Methoxychlor 50% WP Insecticide
	11421	CHV	1158.	Ortho Lawn Disease Control Fungicide W.P.
	11423	UNI	1159.	Vitaflo-280 Liquid Seed Protectant
	11425	PIC	1160.	Planto Quintozene 75 WP Fungicide
	11426	FRD	1161.	Franklin Animal Insect Powder
	11428	DAL	1162.	Flair Shampoo for Dogs & Cats
	11429	MTC	1163.	Canadex Pet Shampoo
	11430	REC	1164.	Canadian Tire Insect Repellent
	11432	FIS	1165.	Fison's Fi-Drin Livestock Dust
	11433	FIS	1166.	Fison's Fi-Fly Scatter Bait
	11434	FIS	1167.	Fison's Fi-Vap Livestock Spray
	11436	LAT	1168.	Later's 5% Diazinon Granular Insecticide
	11437	LAT	1169.	Later's Diazinon 12.5% Liquid Insecticide
	11441	VAR	1170.	Guardsman 2,4-D Amine 80 Liquid Weedkiller
	11444	GCP	1171.	Mesoranil 50W
	11446	CHP	1172.	Chipman Lawn & Turf Fungicide
	11448	VAR	1173.	Guardsman Lawn-Save
	11452	PIC	1174.	Plantco Benomyl W.P. Systemic Fungicide
	11456	CHP	1175.	Pop-In Rose & Flower Spray Insecticide-Fungicide
	11457	CHP	1176.	Pop-In Fruit Tree Spray Insecticide-Fungicide
	11458	CHP	1177.	Lawn Weedkiller contains 2,4-D Amine and Mecoprop
	11459	CIL	1178.	CIL Slug Killer Pellets contains Methaldehyde
	11460	MAI	1179.	Truban Fungicide 30% WP
	11465	CHV	1180.	Ortho Benomyl Systemic Fungicide
MLL	11466	SCT	1181.	Pro-Turf Granular Fungicide 11
DIB	11473	DIA	1182.	Bravo Flowable Agricultural Fungicide
	11478	BAT	1183.	Bartlett Ferbam 76 Fungicide
	11479	CIL	1184.	CIL Ant and Grub Killer
	11497	PKG	1185.	Delspray T-148 Tobacco Sucker Control Agent
	11498	PKG	1186.	Delete Tobacco Sucker Control Agent
NOF	11499	FAC	1187.	Sprout-Off for Control of Tobacco Suckers
	11500	UNI	1188.	Royaltac Contact Tobacco Sucker Control Agent
	11505	RAW	1189.	House & Garden Spray Aerosol
	11512	CHP	1190.	Chipman Fruit Tree Spray Concentrate Insecticide-Fungicide
	11514	MAI	1191.	Manchester Bug Killer Dust
	11515	MAR	1192.	(2 in 1) Bug Killer Dust

	11520	UNR	1193.	Liquid MH-30 A Plant Growth Regulator
PIN	11523	COA	1194.	Cobra Mosquito Coils
	11527	EMA	1195.	Control 1630B Tobacco Sucker Control Liquid
	11535	CER	1196.	Certi-Mist
	11540	KEM	1197.	Riddex 3610 ULV Fogging Concentrate Insecticide
	11543	CHP	1198.	Hopper-Spray E.C. Insecticide (contains dimethoate)
	11548	WIL	1199.	Wilson's Systemic Fungicide
NOF	11550	FAC	1200.	De-Sprout-V
	11551	CHP	1201.	MCPA Amine 80 Liquid Weed Killer
NOF	11558	FAC	1202.	Fair-Tac for Control of Tobacco Suckers
	11559	ANS	1203.	Sucker-Plucker Tobacco Sucker Control
PEL	11561	PEK	1204.	Pentrete 149 for Tobacco Sucker
	11562	STD	1205.	Stan-Chem 2,4-D Amine 96
	11564	ROO	1206.	Rotospray Resmethrin Liquid Herbicide
	11570	NAP	1207.	Betanal-457 E.C. Post-Emergence Herbicide
	11571	FIS	1208.	Fisons 2,4-D Amine 80 Liquid Weedkiller
	11574	INT	1209.	2,4-D Amine 96
	11575	STD	1210.	Sprout-Off Potato Sprout Inhibitor
	11576	STD	1211.	Sodium TCA 95%
	11581	EMA	1212.	Emtrol 10 Tobacco Sucker Control Liquid
	11583	CHP	1213.	Atlacide Sodium Chlorate Weedkiller
	11585	NIB	1214.	Sumithion 40-W Insecticide
	11590	CHP	1215.	Chipman Methoxychlor E.C. Insecticide
	11591	CHP	1216.	Chipman Malathion 50E.C. Insecticide
	11592	VEL	1217.	Diphacin 120
	11594	USB	1218.	Cobex Herbicide
	11607	CHP	1219.	Corn Oil Concentrate
	11611	DAR	1220.	Wood Preservative
	11612	DAR	1221.	Wood Preservative
	11618	FIS	1222.	Fison's MCPA Amine 80 Liquid Weedkiller
	11635	GCP	1223.	Black Leaf 4
	11646	ANS	1224.	Sprout-Stop Retardant
	11650	ANS	1225.	Retard Liquid Growth Retardant
	11671	DAR	1226.	Stain and Wood Preservative #90
	11672	DAR	1227.	Stain and Wood Preservative #65
	11673	DAR	1228.	Stain and Wood Preservative #80
	11674	DAR	1229.	Stain and Wood Preservative #75
	11675	DAR	1230.	Stain and Wood Preservative #55
	11676	DAR	1231.	Stain and Wood Preservative #50
	11677	DAR	1232.	Stain and Wood Preservative #45
	11678	DAR	1233.	Stain and Wood Preservative #35
	11679	DAR	1234.	Stain and Wood Preservative #30
	11680	DAR	1235.	Stain and Wood Preservative #25
	11694	CYC	1236.	Amino Triazole Weedkiller in 1 lb. containers
	11708	CRB	1237.	CIL SLIK
	11713	LEG	1238.	Rez Penta Wood Preservative
	11714	LEG	1239.	Rez Penta Green Tint Wood Preservative
	11723	NAC	1240.	Gro-Tard
	11729	SAN	1241.	Liquid 580 Emulsifiable Insecticide Concentrate
	11774	SRD	1242.	Stangard Penta Ready-To-Use Green Wood Preservative
	11775	STD	1243.	Stangard Penta Ready To-Use Wood Preservative
	11787	CHP	1244.	Chipman Lawn Weedkiller Liquid 2,4-D Mecoprop
	11789	CNK	1245.	Wex Wetting Agent
PLG	11798	BAZ	1246.	EASF Metatox Powdery Mildew Spray
	11809	CHP	1247.	Agral 90
	11810	PLG	1248.	Hormono 80 Weedkiller contains Liquid 2,4-D Amine
	11817	CHP	1249.	Chipman Lawn Weedkiller Liquid 2,4-D Mecoprop Dicamba
	11852	WEA	1250.	Weedex Safety Bar containing 2,4-D
	11880	PLG	1251.	No Damp for damping off Diseases in Seedlings and Cuttings
	11892	CBB	1252.	CIL Weed-All Sol. Granules
	11909	CHP	1253.	Chipman Lawn and Garden Insect Killer Granules
	11911	CHP	1254.	Chipman Diazinon 5 G Granules
	11913	CHP	1255.	Chipman Diazinon Garden Spray

11926	INT	1256.	Co-op Warble Killer
11971	INT	1257.	Co-op Surfactant Oil Concentrate
11972	INT	1258.	Co-op Emulsifiable Spray Oil
12027	CHP	1259.	Floor Bait Granular Insecticide contains Trichlorfon
12028	CHP	1260.	Chipman Captan Flowable Seed Treatment
12029	CHP	1261.	Chipman Captan 30-Methoxychlor 3 Flowable Seed Treatment
12030	CHP	1262.	Korlan Liquid Insecticide containing Ronnel
12036	CHV	1263.	Ortho Tomato Blossom Fruit Set
12082	CHP	1264.	Chipman Black Fly and Mosquito Spray
12099	WIL	1265.	Liquid Crabgrass Killer
12135	WIL	1266.	Bug Killer Dust containing 5% carbaryl in bags
12136	GRD	1267.	Perma-Kill granular Dursban
12137	GRD	1268.	Rid-It Granular Chlordane
12145	GRD	1269.	Lawn-A-Mat D-Ter-ND contains chlorthal

PESTICIDES THAT ARE CONTAINED IN FERTILIZER

Registration Number under Fertilizer Act (Canada)	Registrant under Fertilizer Act (Canada)	Item	Pesticide
258	Ciba Geigy	1270.	Green Cross Weed 'N' Feed Lawn Fertilizer 20-10-5
331	Simpson-Sears	1271.	Cross Country Pre Emergent Crabgrass Killer 10-6-4
341	Elanco	1272.	Elanco Plant Food and Weed Preventer 4-12-4 Fertilizer
415	Manchester Prod.	1273.	Super Green 10-6-4 with Chlorthal
416	Manchester Prod.	1274.	Super Green 10-6-6 with Chlorthal
418	Manchester Prod.	1275.	Manchester Super Green 7-7-7 with Chlorthal
601	United Co-Ops.	1276.	CO-OP Fertilin 10-6-4 Turf Fertilizer with Weed Killers
619	Burns Foods Ltd.	1277.	Burns "Magic" Organic Fertilizer 9-7-4 with 2,4-D
754	T.Eaton Co.	1278.	Eaton Teco Garden Grove Lawn Fertilizer 9-5-3
755	T.Eaton Co.	1279.	Eaton Teco Garden Grove Lawn Fertilizer 10-6-4
1044	Green Valley	1280.	Green Valley Feed and Weed 5-5-0 with 2,4-D Weedkiller
1307	C.I.L.	1281.	Witts 7-7-7 Weed and Feed contains 2,4-D & Mecoprop
1383	Swift Canadian Co.	1282.	Golden Vigoro Lawn Weed and Feed 12-6-3
1543	Globe Evergreen	1283.	Agro 8-2-2 Lawn Medic Weed and Feed
1565	Ciba Geigy	1284.	Green Cross Lawn Green with Crabgrass Preventer 14-7-3
1635	Cyanamid of Can.	1285.	Aero (R) Green 10-6-4 Weed and Feed with 2,4-D
1646	Green Valley	1286.	Green Valley 20-5-10 Hi-Light Feed and Weed with Killex
1672	C.I.L.	1287.	C-I-L 12-4-8 Weed and Feed
1707	Cyanamid of Can.	1288.	Aero (R) Green 10-6-4 Weed and Feed with Killex
1708	Cyanamid of Can.	1289.	Aero (R) 7-7-7 Lawn Fertilizer with 2,4-D Weedkiller
1710	Cyanamid of Can.	1290.	Aero (R) Green 10-6-4 Lawn Fertilizer with Trifluralin
1842	Knapp Garden Spots	1291.	Knapps 20-10-5 Weed and Feed with Killex
1895	Brockville Chem.	1292.	Nutrite 4-12-8 Plant Food and Weed Preventer with Trifluralin
1927	Brockville Chem.	1293.	Nutrite 10-6-4 Feed'n Crabcheck Lawn Food with C.G. Preventer
1929	Brockville Chem.	1294.	Nutrite 10-6-4 Turf + Feed'n Weedaway with Killex

1953	Knapp Garden Spots	1295. Knapps Lawn Boost 15-5-10 with Chlordane
1955	Agricultural Chem.	1296. Agrico Country Club 10-5-10 with Weed Control
2042	Elanco	1297. Elanco 10-5-5 with Bethrodine for Crabgrass Control in Lawns
2048	C.I.L.	1298. C-I-L Lawn Doctor Rx 6-9-6
2050	Cyanamid of Can.	1299. Aero Green (R) 10-6-4 Crabgrass Preventer with Azak
2051	C.I.L	1300. C-I-L Evergreen with Crab Grass Preventer
2052	C.I.L.	1301. Witts 7-7-7 Weed and Feed
2053	Brockville Chem.	1302. Nutrite Fairway Feed'n Weedaway 12-6-8 with Killex
2054	T.M. Spratt Co.	1303. Spratts Eze-Weed 7-7-7
2055	So-Green	1304. So-Green Weed and Feed 7-7-7
2056	So-Green	1305. So-Green 7-7-7 Crabgrass Preventer contains Azak
2057	So-Green	1306. So-Green 7-7-7 with Chlordane
2058	C.I.L.	1307. C-I-L Evergreen with Crab Grass Preventer 6-9-6
2064	Ciba Geigy	1308. Green Cross Weed 'N' Feed-Killex Lawn Fertilizer 20-10-5
2065	Green Valley	1309. Green Valley 20-5-10 Hi-Light Feed and Weed Bugkil
2066	Green Valley	1310. Green Valley 20-5-10 Hi-Light Feed and Bugkil
2067	Home Hardware	1311. BEAUTI-LAWN 10-6-4 Weed and Feed with 2,4-D
2068	Home Hardware	1312. BEAUTI-LAWN 7-7-7 Weed and Feed with 2,4-D
2069	Hardi Gardens	1313. Hardi Brand 20-5-10 Weed and Feed contains 2,4-D
2070	C.I.L.	1314. C-I-L Lawn Doctor Rx 12-4-8
2071	C.I.L.	1315. C-I-L Evergreen with Grub and Bug Killer 6-9-6
2075	C.I.L.	1316. C-I-L Lawn Doctor Rx 6-9-5
2076	C.I.L.	1317. C-I-L Evergreen with Crab Grass Preventer 6-9-6
2077	United Co-ops.	1318. CO-OP Fertilin 10-6-4 Turf Fertilizer with Crabgrass Preventer
2078	United Co-ops.	1319. CO-OP Fertilin 10-6-4 Turf Fertilizer with White Grub Killer
2079	Cyanamid of Can.	1320. Aero (R) 7-7-7 Lawn and Garden Fertilizer with Chlordane
2080	O.M. Scott & Sons	1321. Turf Builder plus 2 22-5-5
2081	O.M. Scott & Sons	1322. ProTurf Fertilizer plus Dicot Weed Control 30-5-3
2086	Simpson-Sears	1323. Cross Country Weed and Feed 5-5-0 Processed Sewage
2087	Simpson-Sears	1324. Cross Country Grub and Bug Killer 10-6-4 with Chlordane
2088	Cyanamid of Can.	1325. Aero (R) True-Green 10-6-4 Weed and Feed with 2,4-D
2089	Cyanamid of Can.	1326. Aero (R) True-Green 10-6-4 Crabgrass Preventer with Azak
2090	Cyanamid of Can.	1327. Aero (R) Grue-Green 10-6-4 Weed and Feed with Killex
2091	Chevron Chem.	1328. ORTHO-GRO Weed and Feed 21-4-4
2092	Cyanamid of Can.	1329. Aero (R) True-Green 10-6-4 with Chlordane
2093	Chevron Chem.	1330. ORTHO-GRO Lawn Food 19-3-3 (Crab Grass Control)
2094	Stone Fertilizer	1331. Witts Weed and Feed 20-10-5
2095	Stone Fertilizer	1332. Green-Up Weed and Feed 10-6-4
2096	Stone Fertilizer	1333. Mr. Green Weed and Feed 10-6-4
2097	Pacific Agro Co.	1334. Agro Lawn Medic, Weed and Feed 8-2-2
2100	So-Green Ind.	1335. So-Green Fall Season Lawn Food with Weed Control 3-6-10
2101	Swift Canadian	1336. Golden Vigoro and Crabgrass Preventer 12-6-3
2102	Brockville Chem.	1337. Nutrite 4-9-15 Winter Conditioner with Chlorthal
2103	C.I.L.	1338. C-I-L 12-4-8 Weed and Feed
2104	So-Green Ind.	1339. So-Green Weed Destroyer Plus Lawn Food 10-5-10
2105	So-Green Ind.	1340. Lawn Pep 7-7-7 Weed and Feed Fertilizer

2106	C.I.L.	1341. C-I-L Ant & Grub Killer 12-4-8 with Chlordane
2107	C.I.L.	1342. C-I-L Crab-Gard 12-4-8 with Betasan
2109	C.I.L.	1343. C-I-L Lawn Doctor 12-4-8
2110	Simpson-Sears	1344. Simpsons-Sears Weed and Feed 20-10-5
2111	Brockville Chem.	1345. Nutrite 10-6-4 Feed'n Bugaway Turf Special lawn Food
2112	Co-Op Federee	1346. PLUS VERT 10-6-4 with herbicides
2113	O.M. Scott & Sons	1347. 22-5-5 with 2,4-D and Mecoprop
2117	So-Green Ind.	1348. So-Green 10-5-10 with Killex
2118	So-Green Ind.	1349. So-Green 10-5-10 with Chlorthal 2.9%
2119	So-Green Ind.	1350. So-Green 10-5-10 with Chlbrdane 2.35%
2120	So-Green Ind.	1351. So-Green 10-6-4 with Siduron 2%
2121	So-Green Ind.	1352. So-Green 7-7-7 with Azak 1.2%
2122	O.M. Scott & Sons	1353. 20-5-5 with Bensulide 6.2%
2123	Brockville Chem.	1354. Nutrite 4-9-15 Winter Guard plus Weedaway-Killex
2124	Brockville	1355. Brockville 10-6-4 with Killex
2125	Brockville	1356. Brockville 12-4-8 with Killex
2126	Brockville	1357. Brockville 14-4-8 with Killex
2127	EAN	1358. T. Eaton 20-15-5 Weed Killer
2128	Cashway	1359. Cashway Lumber 10-6-4 Weed Killer
2129	SCT	1360. O.M. Scott 20-6-6
2133	Cyanamid of Canada	1361. Aero Green Crabgrass Preventer with Chlorthal
pending	C.I.L.	1362. Rose and Flower Doctor 6:9:6 containing 0.5 disulfoton, 0.23% chlorpyrifos, 0.34% eptc., 0.56% thiram

O. Reg. 618/74, Sched. 3.

Schedule 4

AGENT	REGISTRATION NO.	REGISTRANT	ITEM	PESTICIDE
	37	REX	1.	Rexall Moth Fume Crystals (Paradichlorobenzene)
	38	CGC	2.	New Fragrant Fly-Tox a space and contact Insecticide
	50	NIB	3.	Agricultural Sulphur Fine Fungicide
	283	DTC	4.	Dee Tee Paradichlorobenzene MothKiller Crystals
	446	DUT	5.	D.B. Clover Flakes
	646	RAW	6.	Rawleigh Insect Dust
	712	HAG	7.	Vitaspra Plant Insecticide
	745	FAN	8.	Naphthalene (Moth Balls or Flakes)
	780	GAP	9.	Gardo No. 15 Louse Powder contains Rotenone
	788	PEA	10.	Creolin Tar Acid Disinfectant
	825	MAR	11.	Manchester Stainless Livestock Spray
	840	WEP	12.	Vaposector Liquid Insecticide
	869	WOB	13.	Wood's Paradichlorobenzene Deodorizer and Moth Killer
	873	BAT	14.	Bartlett Microscopic Wettable Sulphur
	891	BAT	15.	Bartlett Microscopic Dusting Sulphur 95-5
	977	NUA	16.	NuLife Gets-Ol Cat Flea Powder contains Rotenone
	898	REC	17.	Major Moth Killer Paradichlorobenzene
	1012	JIT	18.	Jitomite Crystals Paradichlorobenzene
	1021	FAP	19.	Familex Gasomite Paradichlorobenzene
	1079	EAN	20.	Moth Crystals (Paradichlorobenzene)
	1087	FLR	21.	Floricide (Paradichlorobenzene)
	1141	SIM	22.	Simpson's Moth Crystals
	1147	WOB	23.	Wood No. 1058 Supersect
	1157	ELN	24.	Electrolux Paradichlorobenzene Crystals
	1197	SIR	25.	Insecticide pour Betail
	1208	SAF	26.	High Test Insect Spray
	1365	CHV	27.	Volck Oil Spray Emulsive Mineral Oil
	1404	CHP	28.	Chipman Louse Powder Rotenone Insecticide
	1425	CGC	29.	Kik Personal Insect Repellent Cream
	1430	PAL	30.	Mosquito Lotion Repellent
	1433	REC	31.	Major Moth Killer contains Naphthalene
	1451	FUB	32.	Fuller Moth Nuggets (Paradichlorobenzene)
	1479	MBE	33.	Insecticide Marquette pour les Bestiaux
	1537	DUS	34.	Dupromite Paradichlorobenzene 98%
	1582	NIB	35.	Kolospray Wettable Sulphur Fungicide
	1598	BEA	36.	P.P.C. Lice Killer
	1620	NOX	37.	Noxall Ant Doom Dust
	1663	GCP	38.	Green Cross Livestock Louse Powder contains Rotenone
	1686	GCP	39.	Green Cross Garden Guard Insecticide Squeeze Duster
	1751	BEA	40.	Atomik Lice Kill
	1755	UAJ	41.	"6-12" Insect Repellent
	1865	NIB	42.	Rotenone 1 Dust Insecticide
	1935	NUA	43.	NuLife Gets-Ol Flea Powder contains Rotenone
	1977	CRC	44.	Cromac Paradi Moth Crystals and Blocks
	1982	AER	45.	Bug-Blitzer Aerosol Insecticide
	1988	WHL	46.	Whitolineum Commercial grade Carbolineum
	2039	SAF	47.	Flea-X Cat and Dog Insecticide Shampoo
	2076	SHL	48.	Agricultural Weedkiller No. 1
	2234	UTL	49.	Wilson's Ant Traps with Chlordecone
	2286	SHL	50.	Neutrol Emulsible Dormant Spray Oil
	2336	CHP	51.	Chipman Marble Wash Powder Insecticide with Rotenone
	2525	REC	52.	NAP-Lene Naphthalene Balls, Crystals and Flakes
	2528	REC	53.	Para-Zene Paradichlorobenzene
	2564	FNA	54.	I.D.A. Moth Killer Paradichlorobenzene Crystals
	2608	PEA	55.	Atomik Stock Spray

	2800	BAI	56.	Commando Aerosol Insecticide
	2866	DIV	57.	Diverside F Insecticide
	2896	CBL	58.	Cardicide Insecticide a Space and contact Spray
	2904	CAA	59.	Cristaux A Mites Paradichlorbenzene Cadillac
	3102	NIB	60.	Niagara Micro-Niasul Wettable Sulphur-Fungicide
	3141	CHP	61.	Atlox Vegetable Dust Rotenone Insecticide
	3166	BEA	62.	Beacon Fly Killer contains Rotenone
	3169	BAI	63.	Super Microsol Insecticide
	3271	STQ	64.	Stanley Perfumed Pardichlorobenzene Crystals
	3272	STQ	65.	Stanley Solidified Paradichlorobenzene Moth Cakes
	3276	RAW	66.	Rawleigh Paradichlorobenzene Moth Crystals and Nuggets
	3320	KEL	67.	Mill-O-Sect Insecticide
	3418	IMP	68.	Esso Mineral Oil Weed Killer 350
	3428	GCP	69.	Green Cross 1% Rotenone Dust
	3439	GCP	70.	Green Cross Deritox Garden Guard Refill
	3555	KIN	71.	King 1% Rotenone Dust Insecticide
	3577	MBE	72.	Marquette Crystals Paradichlorobenzene
	3600	KEM	73.	Riddex Special Strength Insecticide
NOE	3614	MIF	74.	Midland Mill-O-Cide Formula B 9 Food Insecticide
	3639	TUC	75.	Warfarin Bait Paks (Meal or Pellets)
	3661	TDA	76.	Tue-Mite "Neo" Anti-Mite Moth killer
	3682	MOR	77.	Mothal - Naphthalene - Moth Balls - Moth Flakes
	3684	MOR	78.	Mothal - Paradichlorobenzene - Moth Killer
	3691	TUC	79.	Stock Spray-Ready to use
	3740	KEM	80.	Ded-Rat Prepared Rodenticide (containing Warfarin)
	3758	NOX	81.	Noxall Rat Bait containing Warfarin and Sulfaquinoxaline
	3760	BEA	82.	Beacon Rat & Mouse Killer containing Warfarin
	3766	MTC	83.	Fleatex Insecticide Powder
	3787	FED	84.	Warfarin Treated Ready to Use Kornbait
	3789	PIE	85.	Pied Piper Podent Die-Ner-Ready to Use Rat & Mouse Killer
	3813	VIC	86.	Victor Warfarin Rat and Mouse Bait
	3836	WOB	87.	Woods Microsect Pyrethrins-Piperonyl Butoxide
	3837	MAR	88.	Ready Mix Warfarin Rat & Mouse Killer
	3853	DOS	89.	KR4 Warfarin Rat and Mouse Killer
	3872	HAU	90.	My-T Mite Powder
	3881	BEA	91.	Ready to Use Warfarin Bait
	3883	INT	92.	Hastings Ratmaster Prepared Bait with Warfarin
	3918	CHP	93.	Chipman Microfine Sulphur 92 Fungicide
	3929	KEM	94.	Riddex Fifty Insecticide
	4021	STF	95.	Alfa Brand Wettable Sulfur Fungicide
	4030	RAL	96.	Purina Poultry Insecticide Roost Paint
	4039	GCP	97.	Green Cross Tantoo Repellent Pressurized Spray
	4090	ESC	98.	Levilite Piperonyl Butoxide - Pyrethrin Insecticide
	4103	LAT	99.	Later's 1% Rotenone Dust Insecticide
	4111	KEM	100.	Riddex Eighty Concentrated Insecticide
	4119	HAF	101.	Deth Rat-Mouse Exterminator-Bait
	4146	HAF	102.	Deth Animal and Plant Insect Powder
	4152	CHP	103.	Chipman Dairy, Mill and Livestock Spray Insecticide
	4201	MBE	104.	Boules et Flocons a Mites (Naphthalene)
	4260	HAU	105.	Hartz Mountain Mit-E-Kil Liquid Insect Control
	4305	SAF	106.	Rodentkil Warfarin Bait
	4316	REX	107.	Rexall Moth Proofer Pressurized Spray
	4339	WEP	108.	Ratmort with Prolin new improved Rat and Mouse Killer Pellets
	4347	RAW	109.	Rawleigh Paradichlorobenzene Moth and Deodorant Blocks
VIR	4353	VIT	110.	Lethalaire V-21 an Aerosol Insecticide
	4466	KEM	111.	Riddex Ten Insecticide
	4523	NIB	112.	Household Space and Contact Spray insecticide
	4550	HAG	113.	Ratu Rat and Mouse Killer Bait containing Warfarin
	4586	CYC	114.	Malathion 4% Dust Insecticide

	4607	ALS	115.	ACS Rat and Mouse Killer contains Warfarin
	4627	INT	116.	Co-op Pyrenone Oil Spray
	4784	WIP	117.	Industrial Strength Aerosol bomb
	4802	SAQ	118.	Insecticide Miro Pyrenone
	4810	NIB	119.	Niagara Malthion 4 Dust Insecticide
	4821	GCP	120.	Green Gross 4% Malathion Dust
	4822	INT	121.	Co-op Paradichlorobenzene Moth Crystals
	4853	LAT	122.	Later's Livestock Insect Killer Aerosol Spray
	4884	FUB	123.	Fuller Moth Proofer Pressurized Spray
BAU	4991	GAH	124.	"Arnold" Sulph-O-Spray
BAU	5001	GAH	125.	"Arnold" P-R (Pyrethrum-Rotenone)
	5107	LAT	126.	Later's Liquid Warfarin Mouse and Rat Killer
	5140	INT	127.	Co-op Garden Insect Dust contains Rotenone
	5190	UAJ	128.	"6-12" Insect Repellent Stick
	5198	REC	129.	Economy Moth Balls and Flakes - Napthalene
	5261	BRH	130.	Bramco Malathion 4% Dust an Agricultural Insecticide
	5293	LAT	131.	Later's Garden Sulphur - Fungicide
	5294	FUB	132.	Repel Insect Repellent
	5315	HAE	133.	Sect-O-Cide Spray for Flying and Crawling Insects
	5349	LAT	134.	Later's 5% Malthion Dust
SIL	5353	ACE	135.	(1) Flea Band (2) Flea Collar for Cats and Dogs
FER	5365	HYD	136.	Raponex Warfarin Prepared Rat and Mouse Killer Bait
	5379	BRH	137.	Bramco Captain Fungicide 5% Dust
	5386	HIL	138.	Hilo Dry Bath Pressurized Spray for Dogs
	5396	RAW	139.	Rawleigh Pressurized Moth Proofer
	5434	HIL	140.	Hilo Flea and Fungus Powder
	5436	HIL	141.	Hilo Dip with Rotenone, Concentrated Rinse for Dogs
	5437	KIN	142.	King 4% Malathion Dust Insecticide
	5448	CAA	143.	Cadillac Pyrenol Insecticide (Pyrenone)
	5458	GEK	144.	Brantford Fly Bomb
	5468	HIL	145.	Hilo Flea Tick and Insect Spray Pressurized
	5487	RAW	146.	Rawleigh Stock Spray
	5490	ABE	147.	Waco Bugkill Aerosol Insecticide
	5499	LAT	148.	Later's 5% Captan Fungicide Dust
	5565	OSD	149.	Pentox Primer Sealer Wood Preservative Dark Green
	5643	LOR	150.	Rodenex Rat Killer contains Warfarin
	5663	INT	151.	Co-op Louse Powder contains Rotenone Insecticide
	5769	LAT	152.	Later's Animal Insect Powder
	5810	LOR	153.	Spranox Insecticide House and Garden Insecticide
	5834	KIN	154.	King Insect Repellent Bomb
	5846	UAJ	155.	"6-12" Insect Repellent Spray
	5487	LOR	156.	Spranox - Insecticide Domestique
FER	5860	HYD	157.	Nibonex No-Nib'l Rabbit Repellent
	5876	REL	158.	Redicide Aerosol Insecticide
	5880	REL	159.	Agricide 77 Space and Contact Spray
	5909	NIB	160.	Rat and Mouse Bait with Warfarin
	5923	TUC	161.	Pres Stock Fly Killer for Horses and Livestock
	5924	REL	162.	Lix Moth Spray
	5960	AVP	163.	Avon Moth-Proofer
	6063	LAT	164.	Later's Warble Fly Wash
	6086	PAU	165.	Paula Insect Killer Bomb
	6099	REL	166.	Redi-Kill Warafarin Rat and Mouse Killer Pellets
	6109	ABE	167.	Waco 50-7 Industrial Insecticide
	6120	KEM	168.	Riddex Insecticide
VIR	6159	VIT	169.	Lethalaire V-23 Hi-Pressure Aerosol Insect Killer
MCK	6226	SUQ	170.	Stim-U-Plant African Violet House Plant Spray

	6232	JOH	171.	Moth-Raid Moth Proofer
	6234	JOH	172.	Raid Insect Spray
	6236	SAR	173.	Sarm Rat & Mouse Bait contains Warfarin
	6325	LAT	174.	Later's Dormant Oil Spray
	6338	RAL	175.	Purina Home Aero-Spray Insecticide
	6371	INS	176.	Bar-Rot Wood Preservative
	6411	CHP	177.	Ridsect Household Insect Spray
	6412	STO	178.	Repex Insect Repellent - Lotion
	6414	STO	179.	Repex Insect Repellent - Pressurized
	6465	TUC	180.	Grain Guard Powder contains Malathion
	6496	NOX	181.	Bixakk Flea-Nek-Tye with Lindane for Dogs and Cats
	6504	MBE	182.	Mala-4-Poudre a poux soupoudrage
	6508	NIB	183.	Grain Protectant Insecticide
	6525	RAW	184.	Rawleigh Rat & Mouse Killer
	6551	TUC	185.	Cowpest Louse Powder contains Rotenone
	6581	TUC	186.	Krumkil Prepared Mouse Bait contains Fumarin
	6586	CAG	187.	Odorless Farm and Home Disinfectant Sanitizer
	6591	CHV	188.	Ortho Indoor Plant Insect Homb
	6592	NAZ	189.	Boules et Flocons a Mites (Naphthalene)
	6593	NIP	190.	Lion Brand Mosquito Coil for Killing Mosquitos
	6655	CHV	191.	Ortho Home & Garden Insect Bomb
	6670	LOR	192.	Malathion 4% Dust Insecticide
	6675	CHR	193.	K-M Insecticide Space and Contact Spray
	6701	BRJ	194.	La Salle poison a rats et souris
	6758	RAW	195.	Rawleigh Paradichlorobenzene Perfume and Deodorant
	6799	MBE	196.	Rotenone Marquette
	6812	REC	197.	Azur Insect Bomb for House and Garden
	6824	BCC	198.	Rat Bait contains Warfarin and Sulfaquinoxaline
	6840	CHP	199.	Chipman Grain Protectant Malathion Insecticide Dust
WAL	6858	WAK	200.	Watkins Deodorant Moth Blocks
	6894	CIJ	201.	Kill Moe Insecticide Spray
	6907	SVC	202.	Mercury Killrot B Green Wood Preservative
	6909	DVC	203.	Mercury Killrot E-B Clear Wood Presrvative
	6915	BIE		Bikoe Warfarin Rat and Mouse Killer
	6918	LAT	204.	Later's Moss Killer
	6942	BAP	205.	53-416 Green Bapco Cupricide Liquid Preservative
	6944	WIL	206.	Wilson's Warfarin Rat and Mouse Killer Pellets
	6957	ABL	207.	Atomic Ready Mixed Warfarin Rat and Mouse Bait
	6959	PHP	208.	Preserva-primer Copper Naphthanate Wood Preservative
	6960	ALM	209.	Toxall Preservative Solution
	6975	INT	210.	Co-op 4% Malathion Dust
	6981	PEC	211.	Vitox Preservative (Green0
	6983	PEC	212.	Vitox Preservative (Colourless)
	6986	MOB	213.	Pentanol Dark Green Fungicide
	6995	UAJ	214.	"6-12" Insect Repellent Lotion
	7035	HOL	215.	Holcomb Insekon Space and Contact Aerosol Spray
	7078	TUC	216.	Home and Garden Insect Spray
	7117	CRL	217.	Wood Preservative Green
	7127	NOS	218.	1-30 Toxo A for Wood Copper Naphthenate Preservative
	7146	WOB	219.	Aerosol Insect Killer
LEE	7150	PIC	220.	PIC Mosquito Coils
	7171	INT	221.	Co-op 1% Rotenone Insecticide Dust
	7172	SAF	222.	Food Processors Spray (10-1)
	7207	PIT	223.	Diryl Insecticide Powder
	7212	DUT	224.	D B Aerosol Insecticide Spray
	7222	WIL	225.	Wilson's Warfarin Rat and Mouse Killer
	7226	STM	226.	Zintex Preservative Solution
	7228	STM	227.	Coppertex Preservative Solution
	7260	ALM	228.	Toxall Clear Preservative Solution
	7266	CHV	229.	Ortho Dairy and Stock Fly Spray
	7309	CGC	230.	Kirk Pressurized Personal Insect Repellent

	7317	FLR	231.	Florex Aerosol-Insecticide (House and Garden)
	7334	MBE	232.	Marquette Rotenone Insecticide Dust
	7343	FAN	233.	Eaton's Insect Repellent Liquid
	7344	GAP	234.	Gardo No. 23 Shoo Household Pressurized Spray
	7360	GAP	235.	Gardo No. 24 Warfarin Prepared Bait
	7430	INT	236.	Co-op Rat Killer-Ready-to-Use
	7524	KEM	237.	Riddex 90 Insecticide
VIR	7549	VIT	238.	Lethalaire V-24 Aerosol Insecticide
	7593	AVM	239.	Avmor Command House & Garden Space & Contact Spray
	7613	SHW	240.	Kem Wood Copper Sealer-Preservative (Green) No. 452
	7638	GRI	241.	Appat A Rat Continent Warfarin
	7648	RAL	242.	Purina Rat Kill
	7652	GCP	243.	Green Cross 5% Sevin Dust Insecticide
	7659	DOW	244.	Korlan Residual Insecticide (Pressurized Spray)
	7661	DOW	245.	Korlan Mist Spray Insecticide Space & Contact Spray
	7663	DOW	246.	Korlan Space & Contact Insecticide
	7668	ROR	247.	Roz-Tox-WP-1 Wood, Rope & Fabric Preservative-Green
	7670	ROR	248.	Roz-Tox-WP-2Wood, Rope & Fabric Preservative-Clear
	7689	DOW	249.	Korlan Insecticide Smear Contains Ronnel
	7694	WHL	250.	Whitmoyer Prolin Rat & Mouse Bait
	7703	DOW	251.	KORLAN Insecticide Livestock Bomb contains Ronnel
	7704	HAU	252.	Harz Mountian Luster Bath for Dogs
	7705	NOX	253.	Noxall Flea Brush containing Pyrethrins & Rotenone
	7707	NOX	254.	Noxzema Guard Insect Repellent Spray Pressurized
	7708	ENI	255.	Ensign 320 Wood Preserver (Green)
	7710	ENI	256.	Ensign 320 Wood Preserver (Clear)
	7714	CHV	257.	Volck Supreme Emulsifiable Folage Dormant Oil
	7716	SAQ	258.	Miro Pyrenone (House & Garden) Insecticide
	7720	CNE	259.	Mastercraft Green Wood, Rope & Fabric Preservative
	7722	SIR	260.	Exterminateur de rats et souris - Warfarin
	7725	NIB	261.	Rotenone Insecto Dust for Vegetables, Flowers, Shrubs
	7745	HAU	262.	Hartz Mountain Cat Flea Powder
	7762	REC	263.	Record's Death to Mice .025% Warfarin Bait
	7766	INT	264.	Co-op Barn Spray Ronnel
	7804	NOA	265.	Nor-Var Carbolinuem Wood Preservative
	7806	ALT	266.	Aerosol Insecticide for Home and Garden
	7857	ABE	267.	Waco Dia-One-Insecticide Spray
	7902	CBL	268.	Cardel Special Stock and Diary Spray
FER	7913	HYD	269.	Nibonex Liquid Rabbit Repellent Concentrate
	7919	DAK	270.	Preservo Liquid Water Mildew
	7947	ABE	271.	Waco Mal - Thane Fogging Oil
	7951	BLB	272.	Avenarius Carbolineum
	7958	DOW	273.	Korlan Insecticide Backrubber Oil
	7960	DOW	274.	Korlan Insecticide Household Spray
	8006	NIB	275.	Pyrenone Fruit Fly Dust Insecticide
	8016	KVL	276.	D-Vet Insecticidal Dog Shampoo
	8026	GCP	277.	Green Cross Rose and Flower Guard
	8036	CBA	278.	Copper Naphthenate--Wood Preservative
	8037	NIB	279.	Pressurized Houseplant Insect Killer
CHH	8078	VHC	280.	Bay 29493 Pressurized Spray Ornamental Insecticide
WAL	8079	WAK	281.	Watkins Insect Repellent
	8087	FRD	282.	Louse Grub Killer
	8089	FRD	283.	Livestock Insecticide Bomb
	8092	LAT	284.	Later's Special Industrial Pyrethrum Spray
	8134	WEP	285.	Flybane - Aerosol Insecticide
	8155	KEM	286.	Riddex Super Concentrated.Insecticide
	8158	NIB	287.	Niagara Malathion 4 Pyrethrin 0.1
	8188	RAW	288.	Rawleigh Pyrethrin Fly Killer
	8190	DAK	289.	Preservo Liquid Water Mildew
	8192	BEA	290.	Beacon Dog and Cat Flea Powder
	8198	CAO	291.	Bulldog Grip Green Wood Preservative

	8214	CBL	292.	Carmill New Formula Concentrated Insecticide
	8219	GAP	293.	Gardo No. 30 Pressurized Face Fly Spray
	8226	VAR	294.	Cypro Mill Spray - Double Strength
DIV	8232	CBM	295.	Carbola White Disinfectant and Insecticide
	8243	STF	298.	Magnetic 6 Flowable Sulfur Fungicide
	8301	ARC	299.	Tangle Free Animal Beauty Bath
	8308	FAP	298.	Repel Spray-Antimoustique
	8314	RAL	299.	Purina Poultry Dusting Powder
	8338	MOA	300.	Momar Residu-All Insecticide
	8347	GEK	301.	Brantford Fly Spray
	8357	CHP	302.	Chipman Face-Fly Pressurized Spray
	8376	HAU	303.	Hartz Mountain Luster Bath for Cats
	8378	HAU	304.	Hartz Mountain Rid Flea Dog Shampoo
	8380	HAU	305.	Hartz Mountain Bird Defender
	8383	DOW	306.	Korlan Insecticide Dairy Cattle Spray
	8399	NIB	307.	Pyrenone 5-25 Insecticide Soultion
	8403	ORM	308.	Tenocide Pressurized Spray - Flea, Lice and Tick Killer
	8426	MIJ	309.	Mid-West Insecticide Aerosol Spray
	8440	SIC	310.	Sicop No. 774-420 Preservatif pour le bois
	8464	SAN	311.	Sanfax 489 M Ready to Use Rat Killer
	8465	VIN	312.	VioBin Prolin Rat & Mouse Killer Meal
	8472	JOH	313.	Raid Rose and Flower Spray
	8478	HAU	314.	Hartz Mountain Itch-Stop Dog Lotion
	8483	RAL	315.	Purina Wound Protector - Livestock Bomb Insecticide
	8484	SCO	316.	Mort-Aux Rats Contenant Warfarin
	8492	NIB	317.	Niagara Sevin 5 Dust Insecticide containing Carbaryl
	8498	NOP	318.	Stag Insect REpellent
	8512	REC	319.	Major Moth Balls
	8515	INT	320.	Co-op Livestock Spray with Ronnel
	8516	INT	321.	Co-op Aerosol House and Garden Insect Killer
	8554	GEN	322.	Cuproid No. 1, Wood Preservative
	8568	ERA	323.	Era Warfarin Rat Bait
	8571	NAC	324.	National Chemsearch Aerosol Concentrate Insecticide
WAL	8578	WAK	325.	Watkins Quality Insecticidal Backrubber Oil
AMZ	8586	AMW	326.	Amway Bug Pressurized Spray
	8590	SHL	327.	Neutrol Emulsuble Superior Spray Oil
	8593	GEN	328.	Cuproid No. 3, Wood Preservative
	8600	GEN	329.	Cuproid No. 2, Wood Preservative
	8639	ELS	330.	Industrial Aerosol Insecticide
	8653	NAC	331.	Chemsearch Chem-Fog Concentrate Insecticide
	8668	PPC	332.	Fina Weed Killer Herbicide 197
	8676	WIL	333.	Wilson's Prolin Rat and Mouse Killer Pellets
	8679	GCP	334.	Green Cross Tantoo Liquid Insect Repellent
	8685	NAC	335.	National Chemsearch Pyra Fog 100 Insect Spray
	8695	WHA	336.	Wheat-Belt "Pure Mix" Ronnel Insecticide & Mineral Oil
	8696	MBE	337.	Marquette Pressurized Spray for House and Garden Insects
	8702	LAT	338.	Later's Back Rubber Oil with Ronnel
	8713	CBA	339.	Zinc NaphthenateWood Preservative
	8718	POP	340.	Poulin's Prolin Rat Poison (Ready Mix)
	8719	DTC	341.	Certified Citonella Oil B.P.C.
	8722	MTC	342.	Fle-Ti-Cide Flea and Tick Killing Aerosol Spray
	8725	PIT	343.	Sprecto Pressurized Spray Insecticide with Repellent
WAL	8744	WAK	344.	Watkins Rat and Mouse Killer Bait Station
	8748	HAU	345.	Hartz Mountain Flea and Tick Killer for Cats
	8749	POP	346.	Poulin's Bedbug and Beatle Doom
	8765	NAC	347.	Eldrin Insecticide Water Emulsifiable Oil
	8784	HAU	348.	Hartz Mountain Flea and Tick Killer
	8785	KVL	349.	Rad Rid Rat Bait
	8809	LAT	350.	Later's Spra-Brite Contains Ronnel for Insect Control
	8812	JOH	351.	Johnson's Raid Space and Contact Insect Spray
	8820	PRP	352.	Pre-sure Insect Repellent Aerosol Spray

	8823	LAT	353.	Later's Prolin Mouse and Rat Killer
	8825	GAP	354.	Gardo No. 24-p Prolin Pellets Ready to Use
	8831	MAT	355.	Master Louse and Flea Powder - contains Rotenone
	8832	MOR	356.	Odoral - Paradichlorbenzene - Moth Killer & Deodorizer
	8834	HAU	357.	Hartz Mountain Flea Powder for Dogs
	8839	ABE	358.	Waco Ratkill, Poison Bait for Rats & Mice
	8855	VIN	359.	Prolin Rat & Mouse Killer (Pellets)
	8857	BEA	360.	Beacon Prolin - Rat and Mouse Killer
	8874	DOW	361.	Korlan 5G Insecticide Granules
	8877	SHL	362.	Plaquette Vapona No-Pest Strip Insecticide
	8907	COY	363.	Mort-aux-rats et souris "Unique"
GIE	8915	PLA	364.	Beef-eez Formula #3 Korlan Backrubber Oil Insecticide
	8918	BOY	365.	Black Flag Patio and Picnic Spray
	8921	GAP	366.	Gardo No. 35 Barn and Livestock Spray Residual Insecticide
	8926	SAM	367.	Laurentide Cristaux a Mites
	8989	HAU	368.	Hartz Mountain Flea Killer Collar for Dogs and Cats
	9021	HAC	369.	Hykro Keet Bath Flea Spray for Cage Birds
	9023	HAC	370.	Hykro Flea Killer for Dogs and Cats
	9043	TUC	371.	Flyvap Insect Killer Vapona Strip
	9050	CHP	372.	Chipman Therma-Fog M-L Soultion
	9056	INT	373.	Co-op Vapor Fly Strip Containing Dichlorvos
	9059	PFF	374.	Pfizer Ronnel Backrubber Oil
	9060	PRP	375.	Press-sure House and Garden Insecticide Aerosol Spray
	9081	CHP	376.	Sevin 5% Dust General Purpose Insecticide
	9083	KVL	377.	K-Vet Sevin Poultry and Livestock Insect Dust
	9091	BEC	378.	Bell's Rat Death (Contains Warfarin)
	9100	REC	379.	Economy Paradichlorobenzene Moth Crystals
	9101	NIB	380.	Niagara Warfarin Rat and Mouse Killer
	9109	DOW	381.	Korlan Insecticide Livestock Dust containing Ronnel
	9124	HOB	382.	Du-Du Mosquito Coils contains Pyrethrins
	9135	TUC	383.	Poultry Pest Litter Dust contains 5% Carbaryl
AMZ	9138	AMW	384.	Amway Perfumed Moth Crystals
	9144	LAT	385.	Later's Pyrethrin Dust
AMZ	9154	AMW	386.	Amway Pressurized D - 15 Insect Repellent
	9159	MBE	387.	Marquette Malathion 4 Poudre Insecticide
	9162	GAP	388.	Mirol Shampoo for Dogs
	9164	GAP	389.	Gardo Flea and Itch Powder for Dogs
	9166	GAP	390.	Gardo Cat FLea Powder
	9167	GCP	391.	Ant Killer containing Liquid Borax
	9170	MBE	392.	Marquette Vapona Plaquette Insecticide Strip
	9176	NIB	393.	Pressurized Pomogreen Flower Spray
	9181	RAL	394.	Purina Vapona Strip containing Dichlorvos
	9189	NOX	395.	Noxall Flea Powder for Dogs and Cats
	9192	NAC	396.	Killzol Insect Spray
	9203	JOH	397.	Off Pressurized Insect Repellent
	9214	KVL	398.	K-Vet Flea Powder for Cats
	9216	KVL	399.	K-Vet Flea Powder for Dogs
	9217	GCP	400.	Green Cross House and Garden Insect Blaster
	9221	WIL	401.	Wilson's Emulsifiable Dormant Oil Spray Superior Oil
	9222	MBE	402.	Warfarin Plus Prolin
	9228	WOB	403.	Insect-O-Strip Insecticide (contains Dichlorvos)
	9230	SAG	404.	Pyronide 5 Space and Contact Insecticide
	9237	HAC	405.	Hykro Pressurized Dry Shampoo for Dogs and Cats
	9241	ARC	406.	Pressurized Flea Spray
	9259	BRL	407.	"Sun Swallow" Brand Mosquito Killer Coils
	9261	NIB	408.	Niagara Ant Trap with Kepone
	9265	GAP	409.	Pressurized Flea and Tick Spray for Dogs and Cats
	9272	MBE	410.	Marquette 5% Sevin (carbaryl) Dust Insecticide
	9281	RAW	411.	Rawleigh Pressurized Insect Repellent
	9303	ARC	412.	Pressurized Cat Flea Spray
	9313	NIB	413.	Superior Oil 70 Emulsifiable Insecticide

	9328	LAT	414.	Later's Indoor Insect Plant Bomb
	9331	PEN	415.	Pestroy Aerosol Insecticide Space and Contact Spray
PSA	9360	NEO	416.	Diphacin (Ready Mix) Rat and Mouse Killer Bait
	9363	LED	417.	Leittc Pyrenone (Jumbo) Aerosol
	9369	BIE	418.	Bikoe Warfarin Rat and Mouse Killer
	9371	ABE	419.	Waco Pyrenone Spray 5-25
	9374	HEG	420.	Heritage Roach Spray
	9376	HEG	421.	Heritage Contact Insect Spray
	9385	NIM	422.	Redi-Nips (A prepared Prolin Bait) Kills Rats-Mice
	9413	GAP	423.	Gardo No. 24M Prolin Meal
CUS	9430	CUT	424.	Cutter Insect Repellent Special Cream Formula
	9433	JOH	425.	Off Insect Repellent
	9435	JOH	426.	Off Pressurized Insect Repellent New Foam Type
	9447	CGC	427.	Fly-Tox Pressurized Space and Contact Spray
	9499	CGC	428.	Crawl-Tox Pressurized Insecticide
	9452	NIB	429.	Niagara Pressurized Spray Patio Grass & Weed Killer
	9453	CGC	430.	Crawl-Tox Liquid Residual Insecticide
	9454	JOH	431.	Raid Buggy Airborne Insecticide
	9455	GAP	432.	Gardo Anti-Flea Collar with Lindane for Dogs and Cats
	9460	BRG	433.	Rot Cop Wood Preservative
	9476	SMG	434.	Barr-Line Copper Naphthenate Green Preservative
	9478	SMG	435.	Barr-Line Zinc Naphthenate Clear Preservative
	9481	SAA	436.	"Wonder Spray" Malathion Soultion Residual Insecticide
	9488	FRD	437.	Cinch Fly Bomb for Horses
	9502	LOY	438.	Black Flag Ant Traps with Kepone
	9518	NIB	439.	Okanagan Dormant Oil Emulsifiable Insecticide
	9542	BAT	440.	Bartlett Superior 70 Oil Emulsifiable Insecticide
	9568	CBK	441.	White Guard Ronnel Insecticide Wettable Powder
	9571	BEA	442.	Mindiso Luxurious Insecticidal Shampoo
CHH	9572	CHG	443.	Baygon Household Insect Spray
CHH	9573	CHG	444.	Baygon Household Insect Residual Pressurized Spray
	9579	GCP	445.	Green Cross Animert V-101 Wettable Powder Miticide
	9583	RON	446.	Cartwright's Wag Insecticide Shampoo for Dogs
	9596	RON	447.	Cartwright's Insto-Rid Pressurized, Insect Spray for Pets
	9597	REC	448.	Happy Home Paradichlorobenzene Moth Crystals
	9601	INT	449.	Co-op Insect Repellent - Pressurized Spray
	9607	CHP	450.	Chipman Self-Emulsifying Superior Spray Oil 70
	9609	RAW	451.	Rawleigh Sevin Garden Dust Insecticide
	9610	GCP	452.	Green Cross Emulsifiable Spray Oil 70 Insecticide-Miticide
	9612	PEB	453.	Chemitec C.B. Copper Base Preservative
	9626	HAU	454.	Hartz Mountain Flea Soap for Dogs
	9628	ORM	455.	Kennel-Spray Pressurized Residual Insecticide
	9633	PAU	456.	Paula 410 Liquid Insect Repellent
	9635	CAA	457.	Vapona Bande Insecticide
	9648	FAP	458.	Familex Aerosol House and Garden Insectiicde
	9654	MOA	459.	Momar Killersect Space and Contact Insecticide
CHH	9676	CHG	460.	Baytex 1% Granular Residual Mosquito Larvicide
	9681	CER	461.	Certified Laboratorics Certi-fog Insecticide Soultion
	9683	GCP	462.	Green Cross Warfarin Rat and Mouse Killer
	9686	TRO	463.	Trojan Chemicals TRL 11
	9690	INT	464.	Co-op Rat Killer Pellets contains Pindone
	9703	ORM	465.	Flea Shampoo
	9711	COI	466.	Aerosol Insect Killer Space and Contact Spray
	9716	CER	467.	Sabrecide Insecticide Solution
	9732	CER	468.	MC - 200 Insect Spray Solution'
	9734	REC	469.	Happy Home Napthalene Mothballs or Moth Flakes
	9748	JOH	470.	Raid Flying Insect Killer

	9749	JOH	471.	Raid House and Garden Bug Killer
	9752	MTC	472.	Canoline Flea and Louse Preparation
	9754	JOH	473.	Yard Raid Pressurized Outdoor Fogger-Kills and Repels Insects
COF	9756	LIO	474.	Lion Brand Mosquito Coils
	9757	COI	475.	Pressurized House and Garden Insecticide
	9758	TEX	476.	Texaco House and Garden Insecticide
	9760	STY	477.	Star House and Garden Insecticide
	9764	LEW	478.	Oak Lake Cattle Backrubber Liquid Concentrate
	9769	TAI	479.	Cuprotect Clear Water Repellent Wood Preservative
	9770	TAI	480.	Cuprotect Green Water Repellent Wood Preservative
	9773	UAJ	481.	"6-12" Insect Repellent Towelette
	9780	BOY	482.	Black Flag House and Garden Insect Killer
	9781	BOY	483.	Black Flag Fly and Mosquito Killer-Pressurized Spray
	9783	COS	484.	Liquid Roach Spray
	9798	NOX	485.	Noxall Pressurized Cat and Dog Flea Spray
	9799	CAV	486.	Extermo Jet Aerosol
	9803	GRA	487.	Greenleaf Supreme Emulsifiable Foliage and Dormant Oil
	9812	SAN	488.	Super Sanfax insecticide Concentrate
	9815	WAK	489.	Watkins Pressurized Spray for House and Garden
	9817	NIB	490.	Niagara Pressurized Mosquito Repellent Spray
	9819	DEA	491.	Deanco Timbergard Clear, Zinc Naphthenate
	9820	DEA	492.	Deanco Timbergard Green, Copper Naphthenate
	9822	SAK	493.	Purge Flying Insect Killer
	9836	ABE	494.	Tossit Mosquito Larvicide Capsules
	9850	MCX	495.	McEwen's Lice Killer
	9852	UAJ	496.	Sevin 20 Percent Granular Insecticide
	9857	STD	497.	Stan-Chem Potatoe-Gard Liquid Disinfectant
	9864	MBE	498.	Marquette Chalet Fly Repellent Lotion
	9868	ALT	499.	Insect Repellent Spray
	9869	BOY	500.	Shoo Fly Insect Repellent Spray
	9883	PAX	501.	Prodon New Insect Killer
	9887	STQ	502.	Stanley House and Garden Spray Insecticide
	9890	REC	503.	Record Livestock Insecticide Spray
	9891	HAU	504.	Hartz Mountain Wonder Dog Collar
	9908	HAC	505.	Universal Flea-Off Shampoo
TAC	9915	KAL	506.	Kalium Extra-Tail Repellent Spray for Horses
	9928	MOA	507.	Momar Super Concentrated "Klunk" Aerosol Insect Killer
	9929	SAM	508.	Lauren-Sect Liquide repulsif'd insecte
	9930	PEV	509.	"Fly Screen" Liquid Personal Insect Repellent
	9931	WOB	510.	Wood's Cameo Air Freshner
	9937	HOL	511.	Holcomb Insekon - 100 Space and Contact Spray
	9941	MOP	512.	Fleapet Shampoo Detergent for Dogs
	9947	SAF	513.	Dyna-Fog M-L Liquid Insecticide Solution
	9957	CHR	514.	Choisy Insecticide
	9960	QUE	515.	Quinte Fogging Oil Insecticide
	9962	MOP	516.	Malapet Flea Powder
	9967	REX	517.	Rexall Pressurized Insect Repellent Spray
	9968	NIB	518.	Niagara House and Garden Bug Killer
	9979	GCP	519.	Green Cross Ant, Roach and Spider Blaster
	9999	NIM	520.	Nip-Co Baygon Ant/Roach Nip Pressurized, Residual Ins. Spray
	10007	MBE	521.	Chalet Vaporisant Anti-Mostiques
	10029	PIC	522.	PIC Inside Outside Pressurized Bug Killer
	10033	MAZ	523.	Marco-o Rat and Mouse killer
	10034	COI	524.	House and Garden Space and Contact Spray Insecticide
	10036	FAV	525.	Saular Bird Bath - Pressurized Spray Insecticide
	10037	FAV	526.	Saular Flea Killer Pressurized Spray
	10043	COQ	527.	Cooper Dri Kil Powder
	10048	COQ	528.	Cooper Wipe-On Insecticide Solution
	10052	COQ	529.	Cooper Pressurized Fly Spray for Horses and Show Stock
	1055	COQ	530.	Cooper Prolin Rat and Mouse Killer Granules
	10058	COQ	531.	Pulvex Pressurized Kitty and Cat Flea Spray

	10059	COQ	532.	Pulvex Kil-A-Mite Cake
	10063	CHA	533.	"Field" Brand Mosquito Coils
LEE	10064	PIC	534.	PIC Insect Coils
	10074	REC	535.	Record's Spicule Formula 2H Spray
	10075	REC	536.	Record's Pylorus Formula 4J Liquid Insect Spray
	10076	REC	537.	Records Conspirator Formula M Liquid Insect Spray
	10078	NAC	538.	Squad Aerosol Insecticide
	10079	ABE	539.	Waco All-Weather "Bait Blocks" Rodenticide
	10080	NIM	540.	Nip-Co Rose and Flower Bomb. Insecticide-Miticide
	10081	NIM	541.	Bug-Nip Pressurized House and Garden Bug Killer
	10082	NIM	542.	Nip-Co Livestock Insecticide Bomb
	10088	ALG	543.	All Canada Paradichlorobenzene - Moth Crystals
SEP	10089	WHM	544.	Whitmire's Fyls-Off Aerosol Dairy Insecticide
	10105	KEM	545.	Riddex 50-X Insecticide
	10117	COQ	546.	Pulvex Pressurized Flea and Tick Spray
	10118	COQ	547.	Pulvex Anti-Flea Collar for Cats
	10119	COQ	548.	Pulvex Anti-Flea Collar for Dogs
	10120	SAF	549.	Pyronide 33 Space and Contact Spray Insecticide
	10122	LAT	550.	Later's House and Garden Insect Bomb
	10124	LAT	551.	Later's House Powder - Insecticide
	10125	INP	552.	Intertox - Anti Rot Solution Green for Wood
	10126	INP	553.	Intertox - Anti Rot Solution Clear for Wood
	10127	ABE	554.	Waco Sewer-Rat Bait Blocks Rodenticide
	10149	KEM	555.	Riddex M-L Fogging Insecticide Solution
	10151	NIM	556.	Nip-Co Hab-It-Nip, Dog and Cat Repellent Spray
	10152	NIB	557.	Dog-Gone-It, Dog and Cat Repellent Pressurized Spray
	10153	HAU	558.	Hartz Mountain No!! Indoor Pet Repellent
	10154	HAU	559.	Hartz Mountain!! Outdoor Pet Repellent
BEL	10155	MED	560.	Dog Shield Repellent Spray
	10156	COQ	561.	Pulvex Kitty, Cat and Dog Flea, Tick and Fungus Powder
	10159	MBE	562.	Canine Poudre a Chien et Chat
	10164	CBL	563.	Cardel Malthion 2% Back Rubber Insecticide Solution
	10168	SHL	564.	Shell Supreme 70 Summer Spray Oil Insecticide
	10169	COQ	565.	Pulvex Pressurized Luster-Foam Dri-Shampoo
	10170	COQ	566.	Pulvex 6 Use Dog Soap, contains Rotenone
	10171	COQ	567.	Pulvex Pressurized Kitty and Cat Foam Shampoo
	10172	COQ	568.	Pulvex Beauty Treatment Shampoo for Dogs
	10180	MED	569.	Cinch Wipe on Fly Repellent for Horses
	10181	SAF	570.	Sanex Pro Industrial Aerosol
	10182	LAT	571.	Later's Livestock Spray
	10192	BPC	572.	BP Mineral Oil Carrot Spray
SAH	10193	OLB	573.	Ole Time Woodsmans Liquid Fly Dope
SAH	10194	OLB	574.	Ole Time Woodsmans Pressurized Fly Dope
	10195	FRD	575.	Gay Pet Flea-Tick Powder for Dogs and Cats
	10196	FRD	576.	Gay Pet Flea Tick Killer for Dogs and Cats
	10208	SIC	577.	Sicop Incolore No 774-126
	10209	HAC	578.	Hydro Hamster Bath Spray Mist
	10213	NIB	579.	Dri-Die 67 Insecticide Powder
	10214	NIB	580.	Drione Anr and Roach Destroyer Powder
	10218	TRO	581.	Trojan Chemicals Fog-Sect
	10219	RAM	582.	Trojan Chemicals Sect-O-Ban
BYS	10222	RAK	583.	Ramex Rat and Mouse Exterminator
	10229	REC	584.	Record's Liquid Insect Spray Formula 4E
	10235	WOB	585.	Wood's Pressurized Insect Repellent
	10238	GCP	586.	Green Cross Jet Spray Hornet and Wasp Blaster
CHH	10240	CHG	587.	Bay 9010 0.25% Pressurized Dog and Cat Spray
MCM	10250	CBR	588.	Carmel Formula F-3 Insecticide Fogging Solution
MCM	10251	CBR	589.	Carmel Formula F-5 Insecticide Fogging Solution
MCM	10252	CBR	590.	Carmel Formula F-9 an Insecticide Fogging Solution
	10254	SAN	591.	Sanfax Perma-Kill Liquid Insecticide
	10255	SAN	592.	Sanfax Perma-Kill Aerosol Insecticide
	10259	TIM	593.	Time-Mist Insecticide Aerosol

	10260	MAT	594.	Master Warfarin - Rat and Mouse Killer
	10266	INT	595.	Ant and Roach Pressurized Residual Insecticide
	10268	IMP	596.	Flit Mosquito Larvicidal Oil
	10269	NOX	597.	Noxall Dog Flea Soap
	10270	FRD	598.	Gaypet Dog Shampoo
PSA	10271	EAT	599.	Baker's All-Weather "Bait Blocks" Rodenticide
	10273	FRD	600.	Gay Pet Dry Bath Foam for Dogs
MCC	10281	FAR	601.	Repel-X Fly Spray
MCC	10284	FAR	602.	Top-Gloss Pressurized Spray
	10297	NOX	603.	Noxall Dog Flea Shampoo
	10300	REC	604.	Record's Liquid Insect Spray Formula 4F
	10311	BOY	605.	Black Flag Ant and Roach Killer Pressurized Spray
	10312	VIN	606.	VioBin Rotekil Animal Louse Powder
	10315	SAN	607.	Sanfax Super-Fog Liquid Insecticide
	10316	INV	608.	Preservatif pour bois 5G-17 Velva-Glo Dark Green
	10318	COP	609.	Federee Preservatif pour bois vert G-17 2% Cuivre
	10321	LAV	610.	Laurentide Preservatif pour bois, vert G-17
	10323	KEM	611.	Riddex Supreme Insecticide Solution
FIT	10328	ANI	612.	Halt! Dog REpellent Spray
CUS	10343	CUT	613.	Cutter Insect Repellent Foam
	10345	SAN	614.	Super Sanfax Insecticide Concentrated Aerosol
GLE	10352	MBM	615.	Bob Martin's Antimate Fluid
	10367	GCP	616.	Green Cross Pressurized Insect Killer
	10371	NOX	617.	Noxall Scat's Off Cat and Dog Repellent Liquid
MCC	10372	FAR	618.	Farnam Flys-Away Fly Repellent Pressurized Spray
MCC	10373	FAR	619.	Farnam Flys-Away Animal Fly Repellent Wipes
MCC	10375	FAR	620.	Wipe Wipe-On Fly Repellent Liquid
	10377	JOH	621.	Scent-Off Twist-Ons Dog and Cat Repellent
	10378	LEO	622.	Tropi-Guard Aerosol
	10381	SHL	623.	Shell Superior 70 Second Orchard Spray Oil
MCM	10384	CFR	624.	Carmel Formula F-4 Insecticide Fogging Solution
	10386	MAT	625.	Master Warfarin - Rat & Mouse Killer Pellets
	10388	GCP	626.	Green Cross Micro-Fine Sulphur Fungicide
	10389	DIT	627.	Pyratex 101E Mill Spray Concentrate
	10393	COI	628.	Pressurized House and Garden Space and Contact Spray
	10394	STY	629.	Chasse Insects Star - Insect Repellent
	10398	IMP	630.	Flit House and Garden Bug Killer
	10403	HAC	631.	Hykro Dog and Cat Repellent Spray
	10405	HYD	632.	Dogonex Dog Repellent Indoor Pressurized Spray
	10406	HYD	633.	Catonex Cat Repellent Indoor-Outdoor Pressurized Spray
	10409	FAR	634.	Farnam Flys-Away Fly Repellent Stick
	10415	INT	635.	Co-op Fly Killer Pressurized Space Spray
	10420	HAC	636.	Universal Flea-Off Necklace for Dogs and Cats
	10425	JIT	637.	Jito Repel-N
	10426	OLB	638.	Ole Time Woodsmans Kampers Lotion
	10434	PAL	639.	Purina Rub-On Liquid Horse Insecticide
	10438	RAL	640.	Co-op Kill Space Spray
	10440	PWQ	641.	Pes-San Rat and Mouse Destroyer
	10441	NOX	642.	Noxall Pressurized Cat and Dog Repellent
	10443	PLG	643.	Plantco Dormant Oil Spray
MCM	10449	CBR	644.	Formula GH-34 an Insecticide Fogging Solution
	10475	MEX	645.	Met-Scat Pressurized Insect Repellent
	10480	GUM	646.	Gulf Insect Repellent
	10487	COX	647.	L'Huile Repulsif Contre les Moustiques
	10489	DAL	648.	Flair Flea and Tick Powder
	10490	DAL	649.	Flair Flea and Tick Pressurized Spray
	10494	DIV	650.	Diversery Number's Up Indoor & Outdoor Insect Killer
	10499	MIC	651.	Michael's Insecticide Pressurized Spray
MCM	10501	CBR	652.	Formula MU-13 Insecticide Fogging Solution
MCM	10503	CBR	653.	Carmel Formula L-10 Livestock Spray
	10506	GUM	654.	Gulf Spray House and Garden Pest Killer

	10509	ROP	655.	Rogar Flea and Tick Spray
	10514	GFP	656.	Kop-R-Ceal Wood Preservative 30-650
	10521	CGC	657.	Black Leaf Warfarin Rat Bait
	10522	NOC	658.	Citronella Oil B.P.C. Black Fly and Mosquito Repellent
	10523	PRE	659.	Remco Snare Insecticide
	10524	DUT	660.	Quantromyicide Quartenary Ammonium Disinfectant
	10527	MCC	661.	McClelland Warfarin Sure Kill Thro Paks Rodenticide
MCC	10528	FAR	662.	Farnam Grand Champion Instant Coat Brightener
	10530	MCC	663.	McClelland Warfarin Sure Kill Thro Paks Rodenticide Meal
	10535	FLB	664.	Flintkote Wood Preservative Green
	10539	CAI	665.	Shur Grain Rat Kill Bait
	10543	BOY	666.	Black Flag Insect Spray
	10549	BRP	667.	Brock Pressurized Insecticide
	10550	NIB	668.	Sevin All-Purpose Insect Dust
	10551	ORM	669.	Liquacide Flea Killer Deodorant Spray
	10554	SAN	670.	Sanfax Kilz-M - Rksidual Insecticide Spray
	10555	NIB	671.	Pyrenone Fly Spray Concentrate Insecticide
	10557	KEM	672.	Kem-San Roach Spray Concentrate
	10559	GCP	673.	Green Cross Rose Dust
	10560	GCP	674.	Green Cross Shrub and Evergreen Dust
	10565	CHP	675.	Chipman Rose and Garden Dust Insecticide-Fungicide
	10567	CHP	676.	Chipman Rose Dust or Spray Insecticide-Fungicide
	10568	CHP	677.	Chipman Fruit Tree and Garden Dust or Spray
	10570	WEP	678.	Aero-West Insecticide Aerosol Metered
	10574	NIB	679.	Pressurized Wasp and Hornet Killer
	10575	NIB	680.	Pressurized Spray Ant and Roach Killer
	10586	SIO	681.	Cross Country All Purpose Dust or Spray Insecticide
	10587	SHL	682.	Improved Plaquette Vapona Insecticide No-Pest Strip
	10589	WEP	683.	Liquid Insecticide Residual Spray Super Cidol
	10591	BOY	684.	Black Flag Guaranteed Bug Killer
CUS	10595	CUT	685.	Fly Spray for Horses
	10607	UAJ	686.	"6-12" Brand Insect Repellent Spray
	10611	JOH	687.	Scent-Off Pellets
	10633	SAJ	688.	Sanitized (Brand) Van Interior Aerosol
	10635	SAG	689.	Rodentkill - Wax Blocks
	10641	GCP	690.	Green Cross Home & Garden Insect Blaster
	10645	JIT	691.	Co-op Sevin 5% Insecticide Dust
	10648	KEM	692.	Riddex Formula M P B Insecticide Solution
	10652	GCP	693.	Green Cross Dog and Cat Repellent
DIE	10684	DID	694.	Derma Dust
DIE	10685	DID	695.	Derma-Spray
	10697	QUE	696.	"Quinte" Rat and Mouse Killer
	10704	MBE	697.	Marquette Urinex Pressurized Dog and Cat Repellent
	10706	HAC	698.	Universal Dog Flea Powder
	10707	HAC	699.	Universal Cat Flea Powder
	10709	KIN	700.	King 5% Sevin Dust
	10713	CHP	701.	Ridsect House and Garden Pressurized Spray Insecticide
	10723	CAY	702.	Zep Formula 60 Space and Contact Insecticide Spray
	10724	SIO	703.	Cross Country Garden and House Pressurized Spray
	10725	MBE	704.	Marquette Arbes Ornementaux et Haies Insecticide
	10726	MBE	705.	Marquette Poudre a Rosier Insecticide et Fongicide
	10737	MBE	706.	Poudre Insecticide Pour le Betail "X-Tremin"
	10738	LAT	707.	Later's Rat and Mouse Killer Pellets
	10739	COS	708.	DUal Synergist Institutional and Garden Spray
	10740	BEA	709.	Beacon Pet Repellent
	10747	TWI	710.	Purge Concentrated Aerosol Spray
	10748	FUR	711.	Fuller New House and Garden Formula Indoor-Outdoor
	10751	GCP	712.	Green Cross Fly Blaster Pressurized
	10760	KEM	713.	Riddex M-2 Residual Insecticide Solution
	10761	KEN	714.	Riddex P-120 Insecticide Solution
	10762	RON	715.	Cartwright's Bonanza Dog and Cat Repellent
	10770	AIG	716.	Klobber Ant, Roach and Flying Insect Killer

	10771	AIG	717.	Konk Flying Insect Killer
	10777	BEM	718.	Para Pig Huilw Contre les Moustiques
	10781	REC	719.	Record's Green Wood Preservative Liquid
	10785	PSA	720.	Reel Industrial Insecticide
	10790	FUB	721.	Fuller Repel Gel
	10795	DER	722.	GIT Dog and Cat Repellent
	10802	TRO	723.	Trojan TRL-80 Mag-O-Ban Odour Control and Residual Insecticide
	10803	COS	724.	Hi-Pressure Insect Bomb Fumigator-Exterminator
	10810	PIT	725.	K.F.L. Insecticide Shampoo
LEE	10811	PIC	726.	PIC Pressurized Spray Insect Repellent
	10812	DIT	727.	Pyratex 405 Industrial Aerosol Insecticide
	10814	DIT	728.	Pyratex 525 Space and Contact Insecticide
	10822	KEM	729.	Riddex P-230 ThermoFog Thermal Fogging Solution
	10831	GEK	730.	Brantford Fly Bomb
	10836	DIT	731.	Pyratex Toptest Insect Spray
	10838	REC	732.	Record's Odorzene Liquid Insecticide
	10843	KEM	733.	Rid Pressurized Insecticide
	10844	CAY	734.	ZEP 10-X Special Residual Insecticide Spray
	10845	CAY	735.	Zeposector Dual Synergist Institutional and Garden Spray
	10846	COS	736.	Insect Repellent Pressurized Spray
	10854	HAL	737.	HC Sewer-Rat Bait Blocks
	10855	HAC	738.	HC All-Weather Bait Blocks Rodenticide
	10857	MIB	739.	Prolin Mouse Tubes for Killing Mice
	10858	KTM	740.	Exterm Total Release Aerosol Insecticide
DOL	10859	TRM	741.	Flea and Tick Spray
HAW	10860	HAV	742.	Para Bomb M, Para Bomb M Jr. Insecticide
HAW	10861	HAV	743.	Ro-Dust Insecticide
HAW	10862	HAV	744.	Para S Bomb Insecticide Pressurized Spray
HAW	10863	HAV	745.	Fleatol Insecticidal Shampoo
	10865	GCP	746.	Green Cross Residual Household Insect Spray
	10872	MAC	747.	Sergeant's Skip-Flea Shampoo
	10873	DEC	748.	Mildew-Check
	10875	MBE	749.	Insecticide Pour les Bestiaux Marquette
	10878	UNA	750.	HRC Systemic Fungicide for Dust Control of Carnations
	10880	MMC	751.	Sergeant's E-Z Groom Foam Shampoo for Dogs and Cats
	10881	KEM	752.	Improved DED-RAT Prepared Rodenticide
	10882	DIT	753.	Warfarin Bait Pellets or Meal Rat and Mouse Killer
	10883	DIT	754.	Sulfarin Bait Pellets or Meal Rat and Mouse Killer
CHH	10888	CHG	755.	Baytex Fogging Insecticide contains Fenthion
	10890	MMC	756.	Sergeant's Skip-Bath contains Methoxychlor
	10893	DUT	757.	Finale Insecticide Spray
	10894	IND	758.	Kil-Zem Institutional and Garden Spray
	10900	CGC	759.	Spectracide Pressurized Insect Spray
	10901	MMC	760.	Sergeant's Skip-Flea Soap contains Rotenone
	10902	MMC	761.	Sergeant's Sentry Dog Collar contains Dichlorvos
HAW	10908	HAV	762.	Para-Ban Pressurized Insecticide Spray
	10913	GCP	763.	Green Cross Pellets Rat and Mouse Bait
	10917	TRO	764.	Trojan TRB-591 Institutional and Garden Spray
	10919	MMC	765.	Sergeant's Cat Flea Pressurized Spray
	10920	MMC	766.	Sergeant's Flea and Tick Spray
	10921	GCP	767.	Green Cross Dog and Cat Granular Repellent
	10923	KEM	768.	Riddex P-100 Insecticide Solution
ENL	10932	SUD	769.	Liquid Chaperone Dog and Cat Repellent
	10937	INJ	770.	Perma-Guard Grain or Seed Storage Insecticide Dust
	10938	INJ	771.	Perma-Guard Kleen Bin Insecticide Dust D-20
	10939	INJ	772.	Perma-Guard Household Insecticide Dust D-20
	10940	INJ	773.	Perma-Guard Garden and Plant Insecticide D-21
	10941	DAC	774.	Warfarin Meal Feeder Rat and Mouse Bait
	10942	DAC	775.	Warfarin Pellet Feeder Rat and Mouse Bait
	10945	REX	776.	Multi-Purpose House and Garden Insect Killer
	10946	WIL	777.	Pressurized Rose and Flower Spray
ENL	10950	SUD	778.	Chaperone Outdoor Repellent for Dogs and Cats

	10955	KEM	779.	Ded-Rat All Weather Bait Blocks Rodenticide
	10956	KEM	780.	Ded-Rat Sewer Rat Bait Blocks Rodenticide
	10958	CLA	781.	Certified Multicide contains Malathion
	10961	TUC	782.	Cowfly Powder contains Malathion
	10962	GCP	783.	Green Cross Dog and Cat Flea Powder
LEL	10963	HIC	784.	Hawk Mosquito Coils
	10967	MMC	785.	Sergeant's Flea and Tick Powder
	10968	CEA	786.	Colin Ross Custom Formulation Insect Repellent
	10972	NIB	787.	Pressurized Foam Wonder Weeder Spray
	10987	OLM	788.	Theradex Solution Kills Fleas and Lice
	10990	MCC	789.	Slick Insect Spray
NOE	10994	MIL	790.	Bay-O-Cide Residual Insecticide Solution
	10996	GCP	791.	Green Cross Dormant Oil Spray
	11004	JOH	792.	Off Insect Repellent
	11007	UAJ	793.	6-12 Plus Brand Insect Repellent Liquid
	11008	UAJ	794.	6-12 Plus Brand Insect Repellent Stick
	11009	UAJ	795.	6-12 Plus Brand Insect Repellent Lotion
	11010	UAJ	796.	6-12 Plus Brand Insect Repellent Spray
	11020	ULR	797.	Pestarester Wasp Attractant for use in Pestarester Wasp Trap
	11024	DIT	798.	Sulfarin Bait Blocks Rodenticide
	11030	CAN	799.	Certified Sabre Aerosol Insecticide Spray
	11035	AVE	800.	Magna Space and Contact Insecticide Spray
	11040	CHV	801.	Ortho Household Insect Spray
	11041	CHV	802.	Ortho Yard and Patio Insect Fogger
	11042	CHV	803.	Ortho Insect Repellent Pressurized Spray
	11043	CHV	804.	Ortho Rotenone Dust or Spray
	11044	CHV	805.	Ortho Sevin Garden Dust
	11057	DIT	806.	FT-2 Fog Oil
NOE	11058	MIL	807.	Mill-O-Cide Insect Spray
	11065	AEF	808.	Actol House and Garden Insecticide Pressurized Spray
	11068	DEC	809.	Mr. Bebite House and Garden Insecticide Pressurized Spray
	11069	MET	810.	Meteor House and Garden Insecticide
	11073	GCP	811.	Green Cross Fly Blaster
	11074	CHA	812.	Field Brand Mosquito Coils
	11076	NCR	813.	Hexapest Flea Shampoo
	11079	BIO	814.	Bug Blast Institutional and Garden Spray
	11080	WEI	815.	West Fog Liquid Insecticide
	11082	CHE	816.	Chem Kill Concentrated Insecticide Space Spray
	11083	INJ	817.	Perma-Guard Dairy Barn Insecticide Dust D-23
	11085	RID	818.	Riddex B-1 Residual Insecticide contains Baygon
	11090	LAT	819.	Later's Sevin Dust Carbaryl Insecticide
	11100	DIT	820.	Ditchling Wasp and Hornet Killer Pressurized Insecticide
	11102	DIT	821.	Allatex 525 Space and Contact Insecticide
	11105	JCH	822.	Raid Mosquito Coil
	11106	JOH	823.	Bolt Insect Killer Pressurized Spray
	11114	COS	824.	Wasp and Hornet Spray
	11116	RIC	825.	Richardson's Rat-Mouse Pellets
	11117	GEK	826.	Brantford Insecticide Pressurized Spray
	11119	TEC	827.	Chem Kill - Industrial Insecticide Pressurized Spray
	11121	KEM	828.	Riddex Mal-Fog Premium Thermal Fogging Rotenone
	11122	SIP	829.	Bimotex Insecticide Dust contains Rotenone
	11123	WEA	830.	Lawn Guard Dog Repellent Bar
	11124	TRO	831.	TRB 571 Wasp and Hornet Spray
	11126	RIC	832.	Richardson's Dox 405 Industrial Aerosol
	11127	RIC	833.	Richardson's Wasp and Hornet Blitz
	11129	ADE	834.	S.K.R.K. Manufacturers Sure Kill Roach Bait
NCC	11133	FAR	835.	Farnham Horse Lice Duster
VIR	11136	VIT	836.	Lethaliare B-5 Bee-Wasp Killer
	11140	NAC	837.	National Chemsearch Swat Insect Repellent
	11146	JOH	839.	Raid Buggy Whip Airborne Insecticide
	11150	ALT	840.	Insecticide a Betail Alsi
	11160	WOB	841.	Indoor-Outdoor Insect Killer Pressurized Spray
	11164	INT	842.	Co-op Prolin Rat and Mouse Killer Pellets

	11165	SAG	843.	Sanex Fly Killer
	11166	CHV	844.	Ortho Rose and Floral Spray
	11170	NAC	845.	National Chemsearch Aquafog
	11171	NOX	846.	Noxall Pressurized Cat and Flea Spray
	11172	NOX	847.	Noxall Dog Flea Shampoo
	11177	JOE	848.	Johnson's Rat and Mouse Killer
	11179	VEL	849.	Ramik Prepared Bait for Rat and Mouse Control
	11180	CHP	850.	Chipman Warfarin Rat and Mouse Killer Meal Bait
	11183	CHP	851.	Chipman Lawn Weedkiller Pressurized Spray Foam
	11192	QUE	852.	Quinte Fogging Oil Insecticide
	11193	JOH	853.	Raid Mosquito Coils contains Allethrin
	11196	HAC	854.	Universal Dog Flea Off Soap
	11201	DOW	855.	Dursban 1G Granular Insecticide
	11204	JOH	856.	Raid Wasp and Hornet Spray with Baygon
	11205	LAT	857.	Later's Bushman's Delight Mosquito Repellent
	11206	MOA	858.	Klunk Aerosol Insect Killer
	11207	CGC	859.	New Fly-Tox Bug Killer for House and Garden
	11210	MBE	860.	Urinex repulsif granulaire (repousse chien et chat)
ROP	11215	THU	861.	Vet-Kem Kemic Pet Spray
	11216	NIB	862.	Pressurized Patio and Outdoor Insect Spray
	11217	NIB	863.	Pressurized Insect Spray
ROP	11218	THU	864.	Vet-Kem Kemic Flea and Tick Powder
	11219	REC	865.	Record's Insect Repellent
	11223	LAT	866.	Later's 4% Malathion Dust - Insecticide
WAL	11227	WAK	867.	Watkin's Mothproofer Pressurized Spray
	11237	CHV	868.	Ortho Hornet & Wasp Jet Spray Pressurized
	11238	CHV	869.	Ortho Ant, Roach & Spider Spray Pressurized
NAG	11250	NOT	870.	Screen Treat Pressurized Spray contains Ronnel
ROP	11257	THU	871.	Kemic Flea Medallion for Dogs
	11260	WEP	872.	Residol Plus-2 Liquid Insecticide Residual Spray
MCG	11263	TEU	873.	Starbar Thermoset Insect Strip
	11277	IAP	874.	House and Garden Insecticide Maison et Jardin Pressurized Spray
	11278	WEP	875.	Westicide Liquid Insecticide Residual Spray
	11280	KEG	876.	Kelly Green Home and Garden Pressurized Insect Spray
BAI	11283	THU	877.	Vaporette Thermoset Insect Strip for Home and Office Use
	11285	MBE	878.	Muscatox Insecticide pour la maison, continent du Baygon
	11290	BAI	879.	Thuron (Institutional) Thermoset Insect Strip (Commercial)
	11292	CMS	880.	Insect Killer Dual Synergist Pressurized Spray
	11293	AEF	881.	Bio Lan Personal Insect Repellent Pressurized Spray
	11294	AEF	882.	Shoppers Drug Mart Life Personal Insect Repellent Pressurized Spray
	11295	AEF	883.	Zellers Personal Insect Repellent Pressurized Spray
	11296	AEF	884.	Woolco Personal Insect Repellent Pressurized Spray
	11297	HEG	885.	Heritage Aerosol Insecticide
	11298	LFW	886.	Oak Lake Cattle Backrubber Liquid Concentrate contains Ronnel
	11303	HAU	887.	Hartz Mountain Flea Tag
	11305	TWI	888.	Purge Concentrated Aerosol Flying Insect Killer
	11306	GRG	889.	Quick-Kill Insecticide Aerosol
	11309	GRG	890.	Bug-off Insect Repellent Pressurized Spray
	11311	AEF	891.	Shoppers Drug Mart Life Brand House and Garden Insecticide
	11317	ABE	892.	Waco Ratkill Poison Bait for Rats and Mice
	11318	PPC	893.	Pet Products Company Flea Bane
	11319	PPC	894.	Pet Products Company Flea Spray
	11320	PPC	895.	Pet Products Company Flea Shampoo
	11324	AEF	896.	Durable House and Garden Insecticide Pressurized Spray
	11327	GCP	897.	House and Garden Insect Blaster
	11328	BEN	898.	Wood Preservative - Green containing Copper Naphthenate
	11331	DOO	899.	Wood Preservative for Field Cuts
	11332	DIS	900.	Warfarin Disparat Pellets Rat and Mouse Killer
	11338	REL	901.	Agricide 74 Aerosol Stock and Diary Spray
	11344	MMC	902.	Sergeant's Sentry Flea Tag
	11345	CBE	903.	Mastercraft Clear Wood, Rope and Fabric Preservative
AMZ	11346	AMW	904.	Amway Multi-Purpose Bug Spray

SMT	11347	RED	905.	Defy Mosquito Repellent Cloth
	11348	CAL	906.	Bug Off Custom Formulation Insect Repellent
	11349	KEM	907.	Riddex Mosquito-Fog Insecticide
	11352	WEP	908.	Pyrosect Liquid Insecticide
	11360	BIE	909.	Bikoe Dual Synergist Institutional and Garden Spray Insecticide
	11361	NIB	910.	HY-X Liquid Sterilizer and Disinfectant
	11362	STR	911.	Delta Fog Defender
	11367	GUA	912.	Guardian Chemicals R.I.P. Insecticide Concentrate
	11370	WEO	913.	Agro Mist 1
	11371	WFO	914.	Agro-Mist 11
	11377	CAT	915.	Detect-A-Sect Aerosol Insecticide Spray
	11378	MOM	916.	K.O. Insecticide Aerosol Spray
	11379	STM	917.	Matchless Wood Preservative - Green 2% Cooper
	11381	INT	918.	Co-op Rat Killer Ready to Use Powder Bait
	11383	WIL	919.	Wilson's Ant and Roach Spray
	11384	WIL	920.	Wilson's Wasp and Hornet Spray
	11388	MRP	921.	Royal Pro-Tech No. 730M400 Preservatif pour les bois (cuivre)
	11393	JON	922.	Scent-Off Rub Stick Dog and Cat Detergent
	11394	NIB	923.	Rat Patrol Rat and Mouse Killer Bait
	11395	SUP	924.	Supersweet Rodent-Rid contains Warfarin
	11401	BOY	925.	Black Flag House and Garden Bug Killer
	11402	TRO	926.	Trojan Chemicals TRB-505 Insect Repellent Pressurized Spray
BGM	11403	JET	927.	G-96 Brand Insect Repellent Spray Pressurized
CUS	11404	CUT	928.	Cutter Insect Repellent Pressurized Spray
	11405	NIB	929.	Pressurized Liquid House Plant Insect Killer
	11406	NIB	930.	Pressurized Liquid Multi-Purpose Insect Killer
MCC	11408	THU	931.	Trax M Rat and Mouse Bait
	11409	HAG	932.	Ratu Rat and Mouse Killer Bait containing Prolin
NAG	11412	NOT	933.	Nott Ant Trap
	11416	TRO	934.	Trojan Chemicals TRB-611 Three-Way Contact Insecticide
BAI	11417	THU	935.	Vaporette Four Month Insect Strip
HUB	11419	PEY	936.	Vetzme JDS Dog Shampoo
	11431	SAN	937.	Santax Blast-M Insect Killer
	11453	CBE	938.	Canadian Tire Moth Balls
	11454	CBE	939.	Canadian Tire Moth Crystals
	11462	THU	940.	Thuron Flea Tag for Cats and Small Dogs
	11464	CGC	941.	Fly-Tox Insect Strip
	11471	CGC	942.	TAT Ant Traps with Kepone
	11472	INT	943.	Co-op Va-Por Fly Strip
	11477	TUC	944.	Flyvap Insect Killer Vapona Strip
	11480	JOH	945.	Raid Buggy Ship Residual
	11481	SOH	946.	Raid Ant & Roach Killer
	11488	CBB	947.	CIL Rose and Garden Dust
	11506	HAU	948.	Hartz Mountain Wonder Dog Collar
	11507	HAU	949.	Hartz Mountain Cat Flea Tag
	11516	TUC	950.	Flea-Vap Dog Collar
	11517	TUC	951.	Flea-Vap Medallion for Cats
	11537	MMC	952.	Sergeant's Sentry Flea Tag xx
	11538	CGC	953.	New Crawl-Tox Pressurized Residual Insecticide
	11564	ROO	954.	Rotospray Liquid Insecticide
GIE	11582	ECO	955.	Backrubber Oil (contains Korlan)
	11586	CHP	956.	ATOX Vegetable Dust Rotenone Insecticide
	11593	NAC	957.	Kilzone Pressurized Spray Insecticide containing Baygon
	11599	CHP	958.	5% Sevin Dust General Purpose Insecticide
	11634	SHM	959.	Kem Wood Copper Sealer Preservative (Green) No. 452
	11648	NOX	960.	Flea-Nek Tye
	11727	PIC	961.	PIC Mosquito Coil A-50
	11767	CGC	962.	Mouse Yox Kibble Bait
	11815	HAC	963.	No-Mate Spray
	11878	CHV	964.	Ortho Pruning Paint

PESTICIDES CONTAINED IN FERTILIZER

Registration Number under Fertilizer Act (Canada)	Registrant under Fertilizer Act (Canada)	Item	Pesticide
986	Green Valley	965.	Green Valley Moss Killer 4-2-3 with Ferrous Sulphate
1038	Buckerfield's Ltd	966.	Buckerfield's Moss Killer 4-2-3 with Ferrous Sulphate
1645	Green Valley	967.	Green Valley Moss Killer Spray 7-0-0
1843	Knapp Garden Spots	968.	Knapps Lawn Moss Killer 4-2-3 with Ferrous Sulphate
2082	Greenleaf Garden	969.	Greenleaf Moss Killer
2098	Pacific Agro Co.	970.	Agro Lawn Tonic & Moss Killer

O. Reg. 618/74, Sched. 4.

Schedule 5

AGENT	REGISTRATION NO.	REGISTRANT	ITEM	PESTICIDE
Schedule 5 Pesticides containg Phostoxin				
	8050	PHL	1.	Phostoxin (Coated Tablet) containing Aluminum Phosphide
	9265	OGK	2.	Phostoxin (Coated Pellets) containing Aluminum Phosphide
	11334	PH	3.	Phostoxin (Coated Tablets) for Ground Hog Control
	57	NIB	4.	Calcium Arsenate Insecticide
	3015	CHP	5.	Chipman 15% Parathion Wettable Powder Insecticide
	3024	NIB	6.	Parathion 15 Wettable Powder Insecticide
	3197	STF	7.	Parathion 15-WP Insecticide
	3379	BAT	8.	Bartlett Parathion 15% W.P.
	3893	PLG	9.	Plantfume 103 Smoke Generator contains Sulfotep
	4577	STF	10.	Parathion 4 Flowable Insecticide
CHH	5710	CHG	11.	Systox Spray Concentrate Systemic Insecticide
CHH	6719	CHG	12.	Guthion 25% Wettable Powder Crop Insecticide
	6789	SHL	13.	Phosdrin Liquid Insecticide
	7000	PFF	14.	Calsa Phosdrin Insecticide - Liquid
MBY	7022	RHD	15.	Chip-Cal Granular
	7399	NIB	16.	Niagara Aqua Parathion 8 Emulsifiable Concentrate
	7409	CHP	17.	Phosdrin Insecticide contains Mevinphos
	7415	MBE	18.	Arseniate de Chaux Marquette Insecticide pour arrosage
	7478	STF	19.	Parathion 8-F Insecticide Liquid Concentrate
	7601	BAT	20.	Bartlett Phosdrin Insecticide
	7868	PFF	21.	Calsa Parathion EM-2 Emulsifiable Concentrate Insecticide
	7946	NIB	22.	Phosdrin Insecticide
	8074	CHP	23.	Guthion 25% Wettable Powder
CHH	8106	CHG	24.	Guthion Spray Concentrate Crop Insecticide
	8264	PFF	25.	Calsa 15% Parathion Wettable Powder Insecticide
CHH	8740	CHC	26.	Di-Syston Liquid Concentrate Systemic Insecticide
	8779	PLG	27.	Plantfume Parathion Smoke Fumigators
	8897	GCP	28.	Green Cross Phosphamidon Liquid Insecticide
	9076	PLG	29.	Plant Products Phosphamidon 4.8 Spray & Soil Drench
CHH	9275	CHG	30.	Dasanit Spray Concentrate Insecticide
CHH	9519	CHG	31.	Di-Syston 15% Granular Systemic Insecticide
LEI	9913	RAD	32.	Parathion Emulsifiable Liquid Insecticide
	11011	SHL	33.	Birlane Insecticide 25% Wettable Powder
	10028	NIB	34.	Thiodan 4 - Parathion 2E Insecticide
CHH	10101	CHG	35.	Guthion 50% Wettable Powder Insecticide
	10363	NIB	36.	Furadan 4.8 Flowable Insecticide Liquid Concentrate
CHH	10392	CHG	37.	Systox-6 Liquid Concentrate Systemic Insecticide
	10471	CYC	38.	Thimet 600 L.C.
	10507	CHV	39.	Ortho Phosphamidon 9.6 Spray Insecticide
	10609	STF	40.	Dyfonate 10G, An Organophosphorus Soil Insecticide, Granules
	10741	SHL	41.	Birlane 40 Emulsible Concentrate Insecticide
CHH	10828	CHG	42.	Furadan 4.8 Flowable Systemic Insecticide Liquid Concentrate
	10868	DUQ	43.	Du Pont Lannate
	11144	NAP	44.	Curzol SP Miticide
	11212	NIB	45.	Guthion 50-W Azinphos-Methyl Insecticide Wettable Powder
	11725	DUQ	46.	Lannate L Methomyl Insecticide

O. Reg. 618/74, Sched. 5.

Form 1

The Pesticides Act, 1973

APPLICATION FOR AN EXTERMINATOR'S LICENCE OR RENEWAL

I, ...
(name)

of .....
(home address) (telephone number)

....
(lot) (concession) (township) (municipality)

apply for a (i) licence ☐
or as an exterminator:
(ii) renewal of licence ☐

Structural Class	Land Class	Water Class
1 ☐	1 ☐	1 ☐
2 ☐	2 ☐	2 ☐
3 ☐	3 ☐	3 ☐*
4 ☐	4 ☐	
5 ☐*	5 ☐	
6 ☐*	6 ☐	
	7 ☐	
	8 ☐	
	9 ☐	
	10 ☐*	

If (*) complete this section.

Specify the pesticide .....

use .....

premises .....

or equipment .....

to be used in accordance with this licence.

I shall be performing under Operator's Licence No. .....

in the name of .....

at .....
(business address) (telephone number)

If applicable, state present exterminator's licence class and number:

structural .....

land .....

water .....

....
(date) (signature of applicant)

This is to certify that .....
(name of applicant

has been given a medical examination which included a blood count, urine analysis and a check of the applicant's blood pressure and heart.

I find the applicant physically fit to conduct exterminations.

....
(date) (signature of medical practitioner)

.....
(address of medical practitioner)

(To be completed if this is an original application or a medical has been requested by the Director.)

O. Reg. 618/74, Form 1.

Form 2

The Pesticides Act, 1973

APPLICATION FOR AN OPERATOR'S LICENCE OR RENEWAL

1. .....
(name of applicant)

.....
(address) (telephone number)

Official Representative(s) ....
(name) (home address)

....
(name) (home address)

(A) ☐ Application for a licence as an operator Class 1 ☐
2 ☐
3 ☐
4 ☐
5 ☐
6 ☐
7 ☐

(B) ☐ Application for the renewal of operator's licence Class..... Number.....

Part 2

complete if (A) or if information has changed in past year:

The names and addresses of all partners of the partnership or all directors of the company, as the case may be, are:

.....

.....

.....

.....

.....

.....

.....
(date)

.....
(signature of applicant or Official Representative)

O. Reg. 618/74, Form 2.

Form 3

The Pesticides Act, 1973

APPLICATION TO USE AN IMPORTED, UNREGISTERED PESTICIDE

I, ...
(name)

of .....
(address)

.....

qualify as an agriculturist and apply to use on my own agricultural land the following imported, unregistered pesticide:

Product Name.....

Active Ingredient.....

Total Amount..... Rate of Application.....

Concentration..... Formulation.....

To be applied at.....
(lot) (concession)

.....
(township) (municipality)

for the control of.....on.....of acres of.....
(pest) (number) (crop)

.....
(date)

.....
(signature)

O. Reg. 618/74, Form 3.

Form 4

The Pesticides Act, 1973

APPLICATION FOR A PERMIT TO USE A PESTICIDE CONTAINING METHYL BROMIDE, PHOSTOXIN OR CYANIDE COMPOUNDS

1. Name of operator.....Licence Class.....Licence Number.....

Address..... Business telephone number.....

Name of exterminator..... Home telephone number.....

Home address.....

Application for a permit to use.....in an extermination in
(name of pesticide)

premises at.....
(location of premises)

on the....., 19...
(date)

2. I am the holder of Licence Number.....as a Structural Exterminator, Class.....

3. Particulars of the extermination are as follows:

I	Description of premises (indicate whether it is an attached or detached building, an apartment, a portion of a building, a vehicle or other premises)	
II	Date on which premises were last inspected by exterminator	
III	Date on which notice required by the Regulation is to be delivered	
IV	Cubic feet capacity of the premises to be exterminated	
V	Hour in which extermination to be commenced	
VI	Amount of pesticide to be used	
VII	Proposed time of opening premises	
VIII	Names and addresses and brief description of duties of each assistant exterminator or other person who will assist	

.....
(date)

.....
(signature of exterminator)

O. Reg. 618/74, Form 4.

Form 5

The Pesticides Act, 1973

APPLICATION TO PERFORM AN EXTERMINATION
FROM AN AIRBORNE MACHINE

I, ...Land Exterminator's Licence Class.....
(name of exterminator)

Number.....

.....
(home address)

..... Home Telephone No. .....

hereby apply for a permit to use:

.....at.....per acre
(name of pesticide) (rate)

by means of.....
(type of machine)

on.....acres of.....
(number) (crop)

located at.....
(location of area to be treated)

Lot.....Concession.....Township.....County.....

District or Regional Municipality.....

within the time period of.....to.....

to perform an extermination under.....
(name of operator)

....
(operator's licence class and number) (business address)

.....
(business telephone)

....
(date) (signature of applicant)

O. Reg. 618/74, Form 5.

Form 6

The Pesticides Act, 1973

RECORD OF EXTERMINATIONS PERFORMED
(DAILY SPRAY RECORD)

Type of Machine		Identification of Machine		Type of Nozzle or Boom attached	
	Tank Capacity (Pesticide) (in gallons)				

Owner of Property Sprayed	Address				Crop(s) Treated	Treated for	Pesticide(s) Applied %	Application Rate/Acre	Acres Treated	Wind			Temperature Summary	Time of Treatment
	Lot	Con.	Twp.	County or Mun.						Dir.	Vel.	Temp.		

Form 7

The Pesticides Act, 1973

APPLICATION TO PERFORM A WATER EXTERMINATION

I, ... of ....
(owner) (home address) (home phone)

(..... .....) apply for a permit to apply
(business address) (business phone)

pesticides to water in accordance with the following particulars:

1. The extermination is to be performed by: ....
(name)

.... and
(home address) (home phone)

.... or
(business address) (business phone)

2. The licensed exterminator: .....
(name)

....
(home address) (home phone)

...., who holds
(business address) (business phone)

a class ..... licence to perform water extermination, water extermination's licence number,

under ....
(name of operator) (licence class) (licence number)

3. Purpose of treatment is to control:

i. algae: filamentous ☐ ii. submergents: tape grass ☐

Chara sp. ☐ weeds other .....

iii. emergents: water lilies ☐ iv. pest fish (specify) .....

weeds: duckweed ☐ v. insects (specify) .....

cattails ☐ vi. other (specify) .....

other .....

4. Location of area to be treated: ....
(lot) (concession) (township) (county or municipality)

Name of body of water for which treatment is proposed: ....
(name, if applicable)

5. Describe the area to be treated by providing a detailed map indicating:

(*a*) the dimensions of the water area and sufficient depth measurements to allow the calculation of water volume; note location by reference to permanent reference points (buoys, docks, etc.);

(*b*) the position and distance from treated area of any private or municipal water intakes;

(*c*) the boundaries of properties fronting on or adjacent to the area to be treated and the names and addresses of owners or lessee(s) of the properties;

(*d*) the location of any public bathing areas in the vicinity;

(*e*) direction and distance of water movement from the area to be treated;

(*f*) access route to the site and compass co-ordinates.

6. Nature of treatment:

Pesticide to be applied: .....
(name) (formulation)

.....
(active ingredient) (% active) (total quantity)

Area or volume of water to be treated:

.....
(length) (width) (average depth) (maximum depth) (volume)

Where a stream or river is to be treated for control of black fly larvae, indicate:

(*a*) volume of flow: ..... ; or

(*b*) ..... speed of current .....
(width) (average depth) (feet per minute)

Concentration of active ingredient in the water not to exceed ..... ppm; or treatment based on a recommended rate of .....

Method of application: .....
(type of equipment)

Date(s) of application: (10-day period) .....

Time of application: ..... Number of applications: .....

7. This permit is a renewal: Yes ☐ Year(s) of previous permits: .....

No ☐ Permit Number(s): .....

8. General information:

Have all adjacent owners and lessees been informed of the proposed treatment and that their use of water may be temporarily restricted:

Yes ☐ No ☐

Have they all agreed to the proposed treatment: Yes ☐ No ☐

Have other persons or organizations who may be affected by the proposed treatment been informed of it? Yes ☐ No ☐

Who	Name	Address	Telephone
1.	.....	.....	.....
2.	.....	.....	.....

Is water in the vicinity of the treated area used for:

swimming	☐	fishing (species)	☐
irrigation of crops	☐	drinking water	☐
livestock watering	☐	other (specify)	☐

....
(date) (signature of applicant)

O. Reg. 618/74, Form 7.

Form 8

The Pesticides Act, 1973

APPLICATION FOR A LIMITED WHOLESALE
OR
WHOLESALE VENDOR'S LICENCE OR RENEWAL

I, ...

of ....
(home address) (home telephone)

....
(business address) (business telephone)
(lot, concession, township, municipality)

apply for a (i) Limited Wholesale vendor's licence ☐
or
(ii) Wholesale vendor's licence ☐ or renewal ☐

to sell pesticides.

Under this licence the following premises are also included:

(*a*) ....
(person responsible) (address of premises)

....
(premises telephone) (home telephone)

(*b*) ....
(person responsible) (address of premises)

....
(premises telephone) (home telephone)

If a partnership or corporation, state name(s) of the Official Representative(s):

....
(name) (home address) (home telephone) (title)

....
(name) (home address) (home telephone) (title)

list additional premises on reverse side

....
(date) (signature of applicant)

O. Reg. 618/74, Form 8.

Form 9

The Pesticides Act, 1973

APPLICATION FOR A RETAIL VENDOR'S LICENCE AND RENEWAL

I, ...
(name)

of ..... home telephone: .....
(home address)

..... business telephone: .....
(business address)
(lot, concession, township, municipality)

apply for a Class 1 Retail ☐

Class 2 Retail ☐ vendor's licence ☐ renewal ☐

Class 3 Retail ☐

to sell pesticides.

If a partnership or corporation, state (name(s) of Official Representative(s):

....
(name) (home address) (home telephone) (title)

....
(name) (home address) (home telephone) (title)

....
(date) (signature of applicant)

O. Reg. 618/74, Form 9.

Form 10

The Pesticides Act, 1973

APPLICATION TO PURCHASE AND USE A PESTICIDE

I, ...
(name)

of ..... home telephone: .....
(home address)

..... business telephone: .....
(business address)

apply for a permit to purchase and use .....
(name of pesticide) (formulation)

.....
(active ingredient) (concentration) (total quantity)

to be applied at .....on.....
(rate) (crop or area to be treated)

for the control of.....on premises
(name of pest)

located at .....
(mailing address)

lot .....concession .....township.....

county, district or regional municipality .....

during the time period .....to.....

I am licensed under *The Pesticides Act, 1973* and regulations thereunder

Yes ☐

No ☐

If yes, I hold a:

Land Exterminator's Licence, Class..... Number.....

Structural Exterminator's Licence, Class..... Number.....

Water Exterminator's Licence, Class..... Number.....

Operator's.....

....
(date) (signature of applicant)

O. Reg. 618/74, Form 10.

Form 11

The Pesticides Act, 1973

FIRE DEPARTMENT NOTIFICATION
(for reference in case of an emergency)

I, ...
(vendor's name)

of ..... home telephone: .....
(business address)

business telephone: .....

notify the .....
(name of Fire Department)

Fire Department that—

Schedule 1 ☐

Schedule 2 ☐

Schedule 3 ☐

Schedule 4 ☐

Schedule 5 ☐

pesticides are stored at the above premises. I am a holder of a—

Wholesale ☐ Vendor's Licence Number.....

Limited Wholesale ☐ Vendor's Licence Number.....

Class 1 Retail ☐ Vendor's Licence Number.....

Class 2 Retail ☐ Vendor's Licence Number.....

....
(date) (signature)

O. Reg. 618/74, Form 11.

December 17th, 1975.

O. Reg. 48/76.
Filed - January 14th, 1976

REGULATION TO AMEND
ONTARIO REGULATION 618/74
MADE UNDER
THE PESTICIDES ACT, 1973

1. Schedule 1 to Ontario Regulation 618/74 is amended by adding thereto the following items:

12106	SAF	278.	Avitrol Corn Chops Bait for Control of Sparrows
12107	SAF	279.	Avitrol Whole Corn Bait Concentrate for Control of Pigeons
12343	SAF	280.	Avitrol Sparrow Mix
12344	SAF	281.	Avitrol Pigeon Mix
13188	AVC	282.	Avitrol F.C. Corn Chops

APPENDIX 5

THE ENVIRONMENTAL ASSESSMENT ACT, 1975

BILL 14

5TH SESSION, 29TH LEGISLATURE, ONTARIO
24 ELIZABETH II, 1975

The Environmental Assessment Act, 1975

THE HON. W. NEWMAN
Minister of the Environment

TORONTO
PRINTED BY J. C. THATCHER, QUEEN'S PRINTER FOR ONTARIO

BILL 14 **1975**

The Environmental Assessment Act, 1975

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

R.S.O. 1970, c. 118

PART I

INTERPRETATION AND APPLICATION

Interpretation

R.S.O. 1970, c. 100

1. In this Act,

(*a*) "air" includes enclosed air;

(*b*) "Board" means the Environmental Assessment Board established under Part III;

(*c*) "environment" means,

(i) air, land or water,

(ii) plant and animal life, including man,

(iii) the social, economic and cultural conditions that influence the life of man or a community,

(iv) any building, structure, machine or other device or thing made by man,

(v) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from the activities of man, or

(vi) any part or combination of the foregoing and the interrelationships between any two or more of them,

in or of Ontario;

(*d*) "environmental assessment", when used in relation to an undertaking, means an environmental assessment submitted pursuant to subsection 1 of section 5;

(*e*) "land" includes enclosed land, land covered by water and subsoil;

(*f*) "Minister" means the Minister of the Environment;

(*g*) "Ministry" means the Ministry of the Environment;

(*h*) "municipality" means the corporation of a county, metropolitan area, regional area, district area, city, town, village, township or improvement district and includes a local board as defined in *The Municipal Affairs Act* and a board, commission or other local authority exercising any power with respect to municipal affairs or purposes, including school purposes, in an unorganized township or unsurveyed territory;

(*i*) "person" includes a municipality, Her Majesty in right of Ontario, a Crown agency within the meaning of *The Crown Agency Act*, a public body, a partnership, an unincorporated joint venture and an unincorporated association;

(*j*) "proceed" includes "carry on";

(*k*) "proponent" means a person who,

(i) carries out or proposes to carry out an undertaking, or

(ii) is the owner or person having charge, management or control of an undertaking;

(*l*) "provincial officer" means a person designated by the Minister as a provincial officer under Part IV;

(*m*) "public body" means a body other than a municipality that is defined as a public body by the regulations;

(*n*) "regulations" means the regulations made under this Act;

(*o*) "undertaking" means,

(i) an enterprise or activity or a proposal, plan or program in respect of an enterprise or activity by or on behalf of Her Majesty in right of Ontario, by a public body or public bodies or by a municipality or municipalities, or

(ii) a major commercial or business enterprise or activity or a proposal, plan or program in respect of a major commercial or business enterprise or activity of a person or persons other than a person or persons referred to in subclause i that is designated by the regulations;

(*p*) "water" means surface water and ground water, or either of them.

Purpose of Act

2. The purpose of this Act is the betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management in Ontario of the environment.

Application of Act

3. This Act applies to,

(*a*) enterprises or activities or proposals, plans or programs in respect of enterprises or activities by or on behalf of Her Majesty in right of Ontario or by a public body or public bodies or by a municipality or municipalities on and after the day this Act comes into force;

(*b*) only on and after a day to be named in a proclamation of the Lieutenant Governor, major commercial or business enterprises or activities or proposals, plans or programs in respect of major commercial or business enterprises or activities of a person or persons other than a person referred to in clause *a*, designated by the regulations.

The Crown

4. This Act binds the Crown.

PART II

ACCEPTANCE, AMENDMENT, APPROVAL

Submission of environmental assessment

5.—(1) The proponent of an undertaking to which this Act applies shall submit to the Minister an environmental assessment of the undertaking and shall not proceed with the undertaking until,

(*a*) the environmental assessment has been accepted by the Minister; and

(*b*) the Minister has given his approval to proceed with the undertaking.

Exception

(2) Subsection 1 does not prohibit a feasibility study, including research, or any action necessary to comply with this Act before the approval of the Minister is given to proceed with an undertaking.

Content of environmental assessment

(3) An environmental assessment submitted to the Minister pursuant to subsection 1 shall consist of,

(*a*) a description of the purpose of the undertaking;

(*b*) a description of and a statement of the rationale for,

(i) the undertaking,

(ii) the alternative methods of carrying out the undertaking, and

(iii) the alternatives to the undertaking;

(*c*) a description of,

(i) the environment that will be affected or that might reasonably be expected to be affected, directly or indirectly,

(ii) the effects that will be caused or that might reasonably be expected to be caused to the environment, and

(iii) the actions necessary or that may reasonably be expected to be necessary to prevent, change, mitigate or remedy the effects upon or the effects that might reasonably be expected upon the environment,

by the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking; and

(*d*) an evaluation of the advantages and disadvantages to the environment of the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking.

Where licences, etc., not to be issued

6.—(1) Where a proponent is required under this Act to submit to the Minister an environmental assessment of an undertaking,

(*a*) a licence, permit, approval, permission or consent that is required under any statute, regulation, by-law or other requirement of the Province of Ontario, an agency thereof, a municipality or a regulatory authority, in order to proceed with the undertaking shall not be issued or granted; and

(*b*) if it is intended that the Province of Ontario or any agency thereof will provide a loan, a guarantee of repayment of a loan, a grant or a subsidy with respect to the undertaking, the loan, guarantee, grant or subsidy shall not be approved, made or given,

unless,

(*c*) the environmental assessment has been submitted to and accepted by the Minister; and

(*d*) the Minister has given approval to proceed with the undertaking.

Exception

(2) Subsection 1 does not apply to,

(*a*) a licence, permit, approval, permission or consent;

(*b*) a loan, guarantee, grant or subsidy,

in relation to a feasibility study, including research, or for any action necessary to comply with this Act before the approval of the Minister is given to proceed with the undertaking.

Preparation of review and notice

7.—(1) Where an environmental assessment of an undertaking is submitted by a proponent to the Minister, the Minister,

(*a*) shall cause a review of the assessment to be prepared; and

(*b*) shall give notice of,

(i) the receipt of the assessment,

(ii) the completion of the preparation of the review,

(iii) the place or places where the assessment and review may be inspected, and

(iv) such other matters as the Minister considers necessary or advisable,

to the proponent, the clerk of each municipality in which the undertaking is being or will be carried out and, in such manner as the Minister considers suitable, to the public and to such other persons as the Minister considers necessary or advisable.

Inspection of environmental assessment

(2) Any person may inspect an environmental assessment of an undertaking and the review thereof in accordance with the terms of the notice referred to in subsection 1 and may, within thirty days of the giving of the notice or within such longer period as may be stated in the notice,

(*a*) make written submissions to the Minister with respect to the undertaking, the environmental assessment and the review thereof; and

(*b*) by written notice to the Minister, require a hearing by the Board with respect to the undertaking, the environmental assessment and the review thereof.

Withdrawal of environmental assessment

(3) A proponent may withdraw or amend an environmental assessment at any time prior to the day on which notice is given under subsection 1 and thereafter may withdraw or amend an environmental assessment subject to such terms and conditions as the Minister may by order impose.

Matters to be considered by the Minister

8. The Minister, in determining whether to accept or to amend and accept an environmental assessment shall consider the purpose of this Act, the environmental assessment submitted to him, the review thereof, the written submissions, if any, made with respect thereto, any reports required by and submitted to him, and any further review that the Minister has caused to be prepared.

Notice of acceptance of environmental assessment

9. Where a hearing is not required,

(*a*) pursuant to clause *a* of subsection 2 of section 12; or

(*b*) pursuant to clause *b* of subsection 2 of section 12 after receipt of a notice pursuant to clause *b* of subsection 2 of section 7,

and the Minister, after considering the matters set out in section 8, is of the opinion that the environmental assessment is satisfactory to enable a decision to be made as to whether approval to proceed with the undertaking with respect to which the environmental assessment is submitted should or should not be given or should be given subject to terms and conditions, the Minister shall accept the assessment and give notice thereof to the proponent and in such manner as the Minister considers suitable, to any person who has made a written submission to the Minister pursuant to subsection 2 of section 7.

Notice of proposal to amend environmental assessment

10.—(1) Where a hearing is not required,

(*a*) pursuant to clause *a* of subsection 2 of section 12; or

(*b*) pursuant to clause *b* of subsection 2 of section 12 after receipt of a notice pursuant to clause *b* of subsection 2 of section 7,

and the Minister, after considering the matters set out in section 8, is of the opinion that the environmental assessment does not comply with this Act or the regulations, is inconclusive or is otherwise unsatisfactory to enable a decision to be made as to whether approval to proceed with the undertaking with respect to which the environmental assessment is submitted should or should not be given or should be given subject to terms and conditions, the Minister shall give notice to the proponent and in such manner as the Minister considers suitable, to any person who has made a written submission to the Minister pursuant to subsection 2 of section 7 that the Minister proposes to amend the environmental assessment, together with written reasons therefor including particulars of the amendments that the Minister proposes to make to the environmental assessment and, after considering any further written submissions of the proponent and of any such person, the Minister, where a hearing is not required pursuant to clause *a* of subsection 2 of section 12 or to clause *b* of subsection 2 of section 12 after receipt of a notice pursuant to subsection 1 of section 12, shall accept or amend and accept the environmental assessment.

Notice of amendment and acceptance of environmental assessment

(2) The Minister shall give notice of the acceptance or the amendment and acceptance of the environmental assessment pursuant to subsection 1 to the proponent, and in such

manner as the Minister considers suitable, to any person who has made a written submission to the Minister pursuant to subsection 2 of section 7, and where the assessment is amended a copy of the assessment as amended and accepted together with written reasons therefor, to the proponent.

Minister may order research, etc., and reports

11.—(1) Where, before accepting an environmental assessment, the Minister is of the opinion that the environmental assessment as submitted does not comply with this Act or the regulations, is inconclusive or is otherwise unsatisfactory to enable a decision to be made as to whether approval to proceed with the undertaking with respect to which the environmental assessment is submitted should or should not be given or should be given subject to terms and conditions, the Minister shall give notice to the proponent that he proposes, by order, to require the proponent to carry out such research, investigations, studies and monitoring programs related to the undertaking in respect of which the environmental assessment is submitted as are mentioned in the notice, together with written reasons therefor.

Written submissions

(2) The Minister, after considering any written submissions of the proponent made within fifteen days of the giving of the notice or within such longer period as may be stated in the notice, may by order require the proponent to carry out such research, investigations, studies and monitoring programs related to the undertaking in respect of which the environmental assessment is submitted and to submit such reports thereon as the Minister considers necessary.

Notice of order

(3) The Minister shall, in such manner as the Minister considers suitable, give notice of the order to any person who has made a written submission to the Minister pursuant to subsection 2 of section 7.

Reports to be incorporated in environmental assessment

(4) Upon submission of the reports to the Minister they shall be incorporated as part of the environmental assessment and the review thereof that the Minister caused to be prepared may be revised accordingly.

Notice

12.—(1) A notice that the Minister proposes to amend an environmental assessment shall state that the proponent or any person who has made a written submission to the Minister pursuant to subsection 2 of section 7 may, by written notice delivered to the Minister within fifteen days after the giving of the notice of proposal to amend, require a hearing by the Board and the proponent or the person may so require such a hearing.

Hearing

(2) The Minister, by notice in writing,

(*a*) may, where he considers it advisable; or

(*b*) shall, upon receipt of a notice requiring a hearing pursuant to subsection 1 or pursuant to subsection 2 of section 7, unless in his absolute discretion he considers that the requirement is frivolous or vexatious or that a hearing is unnecessary or may cause undue delay,

require the Board to hold a hearing with respect to,

(*c*) the acceptance or amendment and acceptance of the environmental assessment;

(*d*) whether approval to proceed with the undertaking in respect of which the environmental assessment was submitted should or should not be given; and

(*e*) whether the approval mentioned in clause *d* should be given subject to terms and conditions and, if so, the provisions of such terms and conditions.

Idem

(3) Upon receipt from the Minister of a notice pursuant to subsection 2, section 13 or clause *c* of subsection 1 of section 24, the Board shall appoint a time for the hearing, shall give reasonable notice thereof to the proponent and to the Minister and in such manner as the Minister may direct, notice to the public, to any person who has made a written submission to the Minister pursuant to subsection 2 of section 7 and to such other persons as the Minister considers necessary or advisable, and such other notice as the Board considers proper, and shall hold the hearing and decide the matters referred to it in the notice of the Minister.

Parties

(4) The parties to any proceedings before the Board in respect of the undertaking are,

(*a*) the proponent;

(*b*) any person, other than the Minister, who has required the hearing; and

(*c*) such other persons as,

(i) the Board, in its opinion, specifies have an interest in the proceedings, and

(ii) the Board, having regard to the purpose of this Act, may specify.

Other hearings

13. Where an environmental assessment has been accepted or amended and accepted, and no hearing has been held pursuant to section 12, the proponent or a person who has made a written submission pursuant to subsection 2 of section 7 may, by written notice delivered to the Minister within fifteen days after the giving of the notice mentioned in section 9 or the notice mentioned in subsection 2 of section 10, require a hearing by the Board with respect to,

(*a*) whether approval to proceed with the undertaking in respect of which the environmental assessment was submitted should or should not be given; and

(*b*) whether the approval mentioned in clause *a* should be given subject to terms and conditions and, if so, the provisions of such terms and conditions, and

the Minister, by notice in writing,

(*c*) may, where he considers it advisable; or

(*d*) shall, upon receipt of any such notice requiring a hearing, unless in his absolute discretion he considers that the requirement is frivolous or vexatious or that a hearing is unnecessary or may cause undue delay,

require the Board to hold a hearing.

Approval to proceed

14.—(1) Where the Minister has accepted an environmental assessment of an undertaking, the Minister may, with the approval of the Lieutenant Governor in Council or of such Ministers of the Crown as the Lieutenant Governor in Council may designate,

(*a*) give approval to proceed with the undertaking;

(*b*) give approval to proceed with the undertaking subject to such terms and conditions as the Minister considers necessary to carry out the purpose of this Act and in particular requiring or specifying,

(i) the methods and phasing of the carrying out of the undertaking,

(ii) the works or actions to prevent, mitigate or remedy effects of the undertaking on the environment,

(iii) such research, investigations, studies and monitoring programs related to the undertaking, and reports thereof, as he considers necessary,

(iv) such changes in the undertaking as he considers necessary,

(v) that the proponent enter into one or more agreements related to the undertaking with any person with respect to such matters as the Minister considers necessary,

(vi) that the proponent comply with all or any of the provisions of the environmental assessment as accepted by the Minister that may be incorporated by reference in the approval,

(vii) the period of time during which the undertaking, or any part thereof, shall be commenced or carried out; or

(*c*) refuse to give approval to proceed with the undertaking.

Matters to be considered by the Minister

(2) In determining whether to give approval, give approval subject to terms and conditions or refuse to give approval to proceed with an undertaking in accordance with subsection 1, the Minister shall consider,

(*a*) the purpose of this Act;

(*b*) the environmental assessment of the undertaking as accepted by the Minister;

(*c*) the submissions, if any, made to the Minister with respect to the environmental assessment.

Notice of approval

(3) The Minister shall give notice, together with written reasons therefor, of his approval, approval subject to terms and conditions or refusal to give approval to proceed with the undertaking to the proponent, and in such manner as

the Minister considers suitable, to any person who has made a written submission to the Minister pursuant to subsection 2 of section 7 and to such other persons as the Minister considers necessary or advisable.

Proceedings under other Acts

1971, c. 86
R.S.O. 1970, c. 332

15. An approval by the Minister pursuant to this Act to proceed with an undertaking does not preclude any proceeding in relation to a contravention of any provision of *The Environmental Protection Act, 1971*, *The Ontario Water Resources Act* or the regulations made under either of those Acts.

Effect of approval

16.—(1) No person shall proceed with an undertaking contrary to any term or condition imposed by the Minister in giving approval to proceed with the undertaking.

Idem

(2) No person shall give, make, issue, interpret or apply any licence, permit, approval, permission, consent, loan, guarantee of repayment of a loan, grant or subsidy that is required in order to proceed with an undertaking contrary to any term or condition imposed by the Minister in giving approval to proceed with the undertaking.

Where proponent proposes to change undertaking

17. Where a proponent of an undertaking proposes to make a change in the undertaking,

(*a*) before the Minister has given approval to proceed with the undertaking, that does not conform to the environmental assessment of the undertaking as accepted by the Minister; or

(*b*) after the Minister has given approval to proceed with the undertaking, that does not conform to any term or condition imposed upon the approval to proceed with the undertaking,

this Act applies to the proposal to make the change in the undertaking as though the proposed change were itself an undertaking to which this Act applies.

PART III

ENVIRONMENTAL ASSESSMENT BOARD

Composition of Board

18.—(1) A board to be known as the Environmental Assessment Board is established and shall be composed of not fewer than five persons who shall be appointed by the Lieutenant Governor in Council and shall not be employed in the public service of Ontario in the employ of any ministry.

Chairman and vice-chairman

(2) The Lieutenant Governor in Council shall designate a chairman and one or more vice-chairmen from among the members of the Board.

Acting chairman

(3) In the case of the absence or inability to act of the chairman or of there being a vacancy in the office of the chairman, a vice-chairman shall act as and have all the powers of the chairman and, in the absence of the chairman and vice-chairman or vice-chairmen from any meeting of the Board, the members of the Board present at the meeting shall appoint an acting chairman who shall act as and have all the powers of the chairman during the meeting.

Term of members

(4) The members of the Board, other than the chairman, shall be appointed for a term of one, two or three years so that as nearly as possible one-third of the members, other than the chairman, shall retire each year.

Term of chairman

(5) The chairman of the Board shall be appointed to hold office during pleasure.

Vacancies

(6) Every vacancy on the Board caused by the death, resignation or incapacity of a member may be filled by the appointment by the Lieutenant Governor in Council of a person to hold office for the remainder of the term of such member.

Quorum

(7) Three members of the Board constitute a quorum.

Employees

(8) Such employees as are necessary to carry out the duties of the Board shall be appointed under *The Public Service Act*. R.S.O. 1970 c. 386

Expert assistance

(9) The Board may appoint from time to time one or more persons having technical or special knowledge of any matter to inquire into and report to the Board and to assist the Board in any capacity in respect of any matter before it.

Remuneration

(10) The members of the Board shall be paid such remuneration and expenses as are determined by the Lieutenant Governor in Council.

Exercise of powers

(11) The powers of the Board shall be exercised by resolution and the Board may pass resolutions governing the calling of and the proceedings at meetings and specifying the powers and duties of employees of the Board and generally dealing with the carrying out of its function.

Practice and procedure

(12) The Board may determine its own practice and procedure in relation to hearings and may, subject to section 28 of *The Statutory Powers Procedure Act, 1971* and 1971, c. 47

the approval of the Lieutenant Governor in Council, make rules governing such practice and procedure and the exercise of its powers in relation thereto and prescribe such forms as are considered advisable.

Conduct of hearings by less than quorum

(13) The chairman may, in writing, authorize less than a quorum of the Board to conduct a hearing and the member or members conducting the hearing shall have all the powers of the Board for the purposes of the hearing.

Only members at hearing to participate in decision

(14) No member of the Board shall participate in a decision of the Board pursuant to a hearing unless he was present throughout the hearing and heard the evidence and argument of the parties and, except with the consent of the parties, no decision of the Board shall be given unless all members so present participate in the decision.

Board may appoint class representative

(15) For the purpose of proceedings before the Board, the Board may appoint from among a class of parties to the proceedings having, in the opinion of the Board, a common interest, a person to represent that class in the proceedings, but any other member of the class for which such appointment was made may, with the consent of the Board, take part in the proceedings notwithstanding the appointment.

Minister entitled to take part in proceedings

(16) The Minister is entitled, by counsel or otherwise, to take part in proceedings before the Board.

Giving of decision

(17) The Board shall give a copy of its decision together with written reasons therefor to the Minister, to the parties, or where an appointment has been made pursuant to subsection 15, to the appointee on behalf of the class, and to such other persons as have made written submissions pursuant to subsection 2 of section 7 and to the clerk of each municipality in which the undertaking is being or will be carried out.

Decisions, etc., of Board not subject to review

When decision is effective

(18) No decision of the Board is effective until it becomes final pursuant to section 24.

(19) No decision, order, direction, resolution or ruling of the Board shall be questioned or reviewed in any court and no proceeding shall be taken in any court by way of injunction, declaratory judgment, *certiorari*, *mandamus*, prohibition, application for judicial review, *quo warranto*, or otherwise to question, review, prohibit or restrain the Board or any of its decisions, orders, directions, resolutions or rulings.

Application of 1971, c. 47

(20) Except as otherwise provided in this Act, *The Statutory Powers Procedure Act, 1971* applies to the proceedings of the Board.

Hearings to be public, exceptions

19. A hearing conducted by the Board or a member or members of the Board shall be open to the public except where the Board or the member or members of the Board conducting the hearing is or are of the opinion that matters may be disclosed at the hearing that are of such a nature, having regard to the circumstances, that the desirability of avoiding disclosure thereof in the interest of any person affected or in the public interest outweighs the desirability of adhering to the principle that hearings be open to the public, in which case, the Board or the member or members of the Board conducting the hearing may hold the hearing concerning any such matters *in camera*.

Effect of decision of Board

20. Any decision of the Board that becomes final pursuant to section 24 shall be deemed to be the decision of the Minister or of the Minister with the approval required by section 14.

Testimony by member, employee or appointee of Board

21. No member, employee or appointee of the Board shall be required to give testimony in any proceeding with regard to information obtained by him in the discharge of his duties as a member, employee or appointee of the Board.

Hearings under R.S.O. 1970, c. 332

22. Where the Environmental Hearing Board, established under *The Ontario Water Resources Act*, proposed to hold or commenced but did not complete a public hearing or did not report thereon under *The Ontario Water Resources Act* 1971, c. 86 or *The Environmental Protection Act, 1971*, immediately before this section came into force, the hearing shall be held or continued or the report may be made by the Environmental Assessment Board or, where it is necessary or advisable in the opinion of the chairman of the Environmental Assessment Board, the Environmental Assessment Board may hold a fresh hearing and any action or notice taken or given by the Environmental Hearing Board shall be deemed to have been taken or given by the Environmental Assessment Board.

Inspection of premises

23. For purposes relevant to the subject-matter of a hearing, the Board, its employees and appointees may enter and inspect any land or premises other than a dwelling at any reasonable time.

Variation or rescission of decisions

24.—(1) Within twenty-eight days after receipt by the Minister of a decision of the Board on any matter referred to it by notice of the Minister pursuant to subsection 2 of section 12 or section 13 or made pursuant to clause *c*, or within such longer period as may be determined by the

Minister within such twenty-eight day period, the Minister, with the approval of the Lieutenant Governor in Council or such Ministers of the Crown as the Lieutenant Governor in Council may designate, may,

(*a*) vary the whole or any part of the decision;

(*b*) substitute for the decision of the Board, such decision as he considers appropriate; or

(*c*) by notice to the Board require the Board to hold a new hearing of the whole or any part of the matter referred to the Board by the notice of the Minister and reconsider its decision.

Idem

(2) Subject to subsection 3, a decision of the Board is final after the expiration of the period or periods mentioned in subsection 1 unless, pursuant to subsection 1, the decision is varied or a decision is substituted for the decision of the Board or a new hearing is required.

Idem

(3) A decision of the Board that has been varied pursuant to clause *a* or a decision that has been substituted for the decision of the Board pursuant to clause *b* of subsection 1, is final.

Idem

(4) The Minister shall give notice, together with written reasons therefor, of any variation, substitution or requirement of a new hearing pursuant to subsection 1, to every person entitled to receive a copy of the decision of the Board pursuant to subsection 17 of section 18.

PART IV

PROVINCIAL OFFICERS

Designation of provincial officers

25.—(1) The Minister may designate in writing one or more employees of the Ministry or other persons as provincial officers for the purposes of any section or Part of this Act or any regulation or section of any regulation made under this Act that is referred to in the designation and in a designation may limit the authority of a provincial officer in such manner as the Minister considers necessary or advisable.

Certificate of designation

(2) The Minister shall issue to every provincial officer a certificate of his designation and every provincial officer, in the execution of his duties under this Act and the regulations, shall produce his certificate of designation upon request.

Powers of provincial officer

26.—(1) Where a provincial officer has reasonable grounds for believing that it is necessary, for the purpose of the administration of this Act and the regulations, he may, upon production of his certificate of designation, enter at any reasonable time any building, other than a dwelling, or any structure, machine, vehicle, land, water or air and make or require to be made such surveys, examinations, investigations, tests and inquiries, as he considers necessary for such purpose, including examinations of books, records and documents and may make, take and remove or may require to be made, taken or removed samples, copies or extracts.

Order authorizing

(2) Where a provincial judge is satisfied, upon an *ex parte* application by a provincial officer, that there is reasonable ground for believing that it is necessary to enter any building, including a dwelling, structure, machine, vehicle, land, water or air for the administration of this Act or the regulations, the provincial judge may issue an order authorizing a provincial officer to enter therein or thereon and to make or require to be made such surveys, examinations, investigations, tests and inquiries and to take the other actions mentioned in subsection 1 but every such entry, survey, examination, investigation, test, inquiry and other such action shall be made or taken between sunrise and sunset unless the provincial judge authorizes the provincial officer, by the order, to so act at another time.

Obstruction of provincial officer

27. No person shall hinder or obstruct a provincial officer in the lawful performance of his duties or knowingly furnish a provincial officer with false information or refuse to furnish him with information required for the purposes of this Act and the regulations.

Matters confidential

28.—(1) Every provincial officer shall preserve secrecy in respect of all matters that come to his knowledge in the course of any survey, examination, test or inquiry under this Act or the regulations and shall not communicate any such matter to any person except,

(*a*) as may be required in connection with the administration of this Act and the regulations or any proceedings under this Act or the regulations;

(*b*) to his counsel; or

(*c*) with the consent of the person to whom the information relates.

Idem

(2) Except in a proceeding under this Act or the regulations, no provincial officer shall be required to give testimony in any civil suit or proceeding with regard to

information obtained by him in the course of any survey, examination, test or inquiry under this Act or the regulations.

PART V

ADMINISTRATION

Application to Divisional Court

29. The Minister, in addition to any other remedy and to any penalty imposed by law, may apply to the Divisional Court for an order,

(*a*) enjoining any act to proceed with an undertaking contrary to this Act; or

(*b*) invalidating any licence, permit, approval, permission or consent issued or granted contrary to subsection 1 of section 6,

and the court may make the order on such terms and conditions as the court considers proper.

Exemption

30. Where the Minister is of the opinion that it is in the public interest, having regard to the purpose of this Act and weighing the same against the injury, damage or interference that might be caused to any person or property by the application of this Act to any undertaking, the Minister, with approval of the Lieutenant Governor in Council or of such Ministers of the Crown as the Lieutenant Governor in Council may designate, may by order,

(*a*) exempt the undertaking or the proponent of the undertaking from the application of this Act or the regulations or any matter or matters provided for in this Act or the regulations subject to such terms and conditions as the Minister may impose;

(*b*) suspend or revoke an exemption referred to in clause *a*;

(*c*) alter or revoke any term or condition of an exemption referred to in clause *a*.

Disclosure

31. Notwithstanding any other provision of this Act, where the Minister is of the opinion that compliance with any provision of this Act is causing, will cause or will likely cause the disclosure of matters that are of such a nature that the desirability of avoiding disclosure thereof in the interest of any person affected or in the public interest outweighs the desirability of disclosing such matters to the public, the Minister may make such order for the protection of such person or the public interest as he considers necessary or advisable.

Record

32.—(1) The Minister shall cause to be maintained a record of every undertaking in respect of which an environmental assessment has been submitted under this Act that, subject to any order of the Minister pursuant to section 31, shall consist of the environmental assessment, the review of the environmental assessment that the Minister caused to be prepared, any written submissions, any decision of the Board or the Minister together with written reasons therefor, if any, made under this Act, any notice under section 9, subsection 2 of section 10, subsection 3 of section 14, subsection 4 of section 24 and section 39 and any order of the Minister pursuant to this Act together with the written reasons, if any, therefor.

Inspection

(2) The Minister shall, upon the request of any person, make available for the inspection of such person any record referred to in subsection 1 including any document forming part of the record as soon as practicable after issuance or receipt of the document.

Powers and duties of Minister

33. The Minister, for the purposes of the administration and enforcement of this Act and the regulations may,

(*a*) conduct research with respect to the environment or environmental assessments;

(*b*) conduct studies of the quality of the environment;

(*c*) conduct studies of environmental planning or environmental assessments designed to lead to the wise use of the environment by man;

(*d*) convene conferences and conduct seminars and educational and training programs with respect to the environment or environmental assessments;

(*e*) gather, publish and disseminate information with respect to the environment or environmental assessments;

(*f*) make grants and loans for research or the training of persons with respect to the environment or environmental assessments in such amounts and upon such terms and conditions as the Minister, subject to the approval of the Lieutenant Governor in Council, may determine;

(*g*) appoint committees to perform such advisory functions as the Minister considers advisable;

(*h*) make such investigations, surveys, examinations, tests and other arrangements as he considers necessary; and

(*i*) with the approval of the Lieutenant Governor in Council, enter into an agreement with any government or person with respect to the environment or environmental assessments.

Protection from personal liability

34.—(1) Except in the case of an application for judicial review or an action or proceeding that is specifically provided for with respect to a person referred to in this subsection in any Act or in a regulation under this or any other Act, no action or other proceeding for damages or otherwise lies or shall be instituted against an employee of the Ministry, a member of the Board or a Crown employee within the meaning of *The Public Service Act* who is a provincial officer or is acting under the direction of an employee of the Ministry, or such member or provincial officer, for any act done in good faith in the execution or intended execution of any duty or authority under this Act or for any alleged neglect or default in the execution in good faith of any such duty or authority.

R.S.O. 1970, c. 386

Crown not relieved of liability

R.S.O. 1970, c. 365

(2) Subsection 1 does not, by reason of subsections 2 and 4 of section 5 of *The Proceedings Against the Crown Act*, relieve the Crown of liability in respect of a tort committed by an agent or servant of the Crown to which it would otherwise be subject and the Crown is liable under that Act for any such tort in a like manner as if subsection 1 had not been enacted.

Hearings under other Acts

35. Where a proponent is required under this Act not to proceed with an undertaking until an environmental assessment of the undertaking has been accepted by the Minister and a public hearing is required or permitted under *The Environmental Protection Act, 1971* or *The Ontario Water Resources Act* other than by the Environmental Appeal Board or the Ontario Municipal Board with respect to the undertaking, the Minister shall order,

1971, c. 86

R.S.O. 1970, c. 332

(*a*) that the public hearing under such other Act may be proceeded with and that this Act or the regulations or any matter or matters provided for in this Act or the regulations that is specified in the order does not apply to the undertaking or proponent; or

(*b*) that this Act applies to the undertaking and proponent and the public hearing under such other Act shall be deemed not to be required or permitted.

False information

36. No person shall knowingly give false information in any application, return or statement made to the Minister, the Board, an employee or appointee of the

Board, a provincial officer or any employee of the Ministry in respect of any matter under this Act or the regulations.

Certificates, etc., as evidence

37. In any prosecution, proceeding or hearing under this Act or the regulations, the production of,

(*a*) a certificate or report of an analyst in the employ of the Crown in right of Ontario designated by the Minister as to the analysis, ingredients, quality, quantity or temperature of any material, whether solid, liquid or gas or any combination of them; or

(*b*) any document under this Act purporting to be signed by the Minister or by or for the Board, or any certified copy thereof,

is *prima facie* evidence of the facts stated therein and of the authority of the person making the document without any proof of appointment or signature.

Service

38.—(1) Any notice, order, approval or other document under this Act or the regulations is sufficiently given or served if delivered personally or sent by registered mail addressed to the person to whom delivery or service is to be made at the latest address appearing on the records of the Ministry.

Notice to clerk of municipality

(2) A notice,

(*a*) given by the Minister pursuant to section 9, section 10 or subsection 3 of section 14;

(*b*) given by the Board pursuant to subsection 3 of section 12; or

(*c*) of the order of the Minister pursuant to section 11,

shall be given to the clerk of each municipality in which the undertaking is being or will be carried out.

Idem

(3) Where notice is given or service is made by registered mail, the giving or service shall be deemed to be made on the seventh day after the day of mailing unless the person to whom notice is given or on whom service is being made establishes that he did not, acting in good faith, through absence, accident, illness or other cause beyond his control receive the notice, order, approval or other document until a later date.

Public notice

(4) Where the Minister or the Board is of the opinion that because the persons who are to be given any notice or document under this Act are so numerous, or for any other reason it is impracticable to give the notice or document to all or any of the persons individually, the Minister or the Board, as the case may be, may instead of doing so, cause the notice or reasonable notice of the contents of the document to be given to the persons by public advertisement or otherwise as the Minister or the Board may direct, and the date on which such notice or reasonable notice of the contents of the document is first published or otherwise given as directed, shall be deemed to be the date on which the notice or document is given.

Inspection of documents

(5) The making available by the Minister of a copy or reproduction made by any means of a document is compliance with the provisions of this Act authorizing the inspection of the document.

Destruction of certain documents

(6) Notwithstanding any provision of this Act, a document may be destroyed by or under the authority of the Minister when it has been completely recorded or copied and the recording or copy is retained for the purpose of inspection under this section.

Where notice to be given to Minister

39. Where a proponent of an undertaking in respect of which an environmental assessment has been accepted by the Minister and for which approval to proceed has been given by the Minister receives notice of any fact, situation, event, order, proceeding or application the result of which or compliance with which has affected, affects or may affect the ability of the proponent to proceed with the undertaking in accordance with any term or condition to which the approval of the Minister to proceed with the undertaking is subject, the proponent shall forthwith give notice thereof to the Minister.

Offence

40. Every person, whether as principal or agent, or an employee of either of them, who contravenes any provision of this Act or the regulations or fails to comply with an order or a term or condition of an approval issued or given under this Act is guilty of an offence and on summary conviction is liable on a first conviction to a fine of not more than $5,000 and on a subsequent conviction to a fine of not more than $10,000 for every day or part thereof upon which the offence occurs or continues.

PART VI

REGULATIONS

Regulations

41. The Lieutenant Governor in Council may make regulations,

(*a*) defining any enterprise or activity as a major commercial or business enterprise or activity;

(*b*) defining enterprises or activities as classes of major commercial or business enterprises or activities;

(*c*) defining any body other than a municipality as a public body;

(*d*) designating any major commercial or business enterprise or activity or class of major commercial or business enterprises or activities as an undertaking or class of undertakings to which this Act applies;

(*e*) designating any proposal, plan or program or any class of proposals, plans or programs in respect of any major commercial or business enterprise or activity or any class of major commercial or business enterprises or activities as an undertaking or class of undertakings to which this Act applies;

(*f*) exempting any person, class of persons, undertaking or class of undertakings from the provisions of this Act, the regulations or any section or part of a section thereof and designating any enterprise or activity or class of enterprises or activities or any proposal, plan or program or any class of proposals, plans or programs in respect of any of them by or on behalf of Her Majesty in right of Ontario, by a public body or public bodies or by a municipality or municipalities as an undertaking or class of undertakings to which this Act applies notwithstanding any exemption under this clause;

(*g*) prescribing additional information that shall be contained in environmental assessments submitted to the Minister;

(*h*) prescribing forms for the purposes of this Act and providing for their use.

Class of undertakings

42. A class of undertakings under this Act or the regulations may be defined with respect to any attribute, quality

or characteristic or combination thereof and may be defined to include any number of undertakings under one ownership or more than one ownership and whether or not of the same type or with the same attributes, qualities or characteristics.

Scope of regulations

43. Any regulation may be general or particular in its application, may be limited as to time or place or both and may exclude any place from the application of the regulation.

Adoption of codes in regulations

44. Any regulation may adopt by reference, in whole or in part, with such changes as the Lieutenant Governor in Council considers necessary, any code, formula, standard or procedure, and may require compliance with any code, standard or procedure so adopted.

Application of regulations

45.—(1) A regulation is not effective with respect to an enterprise or activity that is commenced before the regulation comes into force.

Idem

(2) Notwithstanding subsection 1, a regulation is effective with respect to,

(*a*) any major commercial or business enterprise or activity that is commenced after the coming into force of this Act and that is being carried on or is not completed when the regulation comes into force;

(*b*) a significant change made in any major commercial or business enterprise or activity after the coming into force of this Act and that is being carried on or is not completed before the regulation comes into force; or

(*c*) any proposal, plan or program in respect of any major commercial or business enterprise or activity or any class of major commercial or business enterprises or activities proposed or made before the coming into force of the regulation whether the proposal, plan or program is proposed or made before or after the coming into force of this Act.

Idem

(3) Notwithstanding subsection 1, a regulation made under clause *f* of section 41 is effective whether the enterprise or activity, or class of enterprises or activities, or proposal, plan or program or class of proposals, plans or programs in respect of any of them is commenced, carried on, made or proposed before or after the coming into force of this Act.

PART VII

MISCELLANEOUS

46. This Act comes into force on a day to be named by proclamation of the Lieutenant Governor. Commencement

47. This Act may be cited as *The Environmental Assessment Act, 1975*. Short title

1st Reading
March 24th, 1975

2nd Reading
July 2nd, 1975

3rd Reading
July 14th, 1975

THE HON. W. NEWMAN
Minister of the Environment

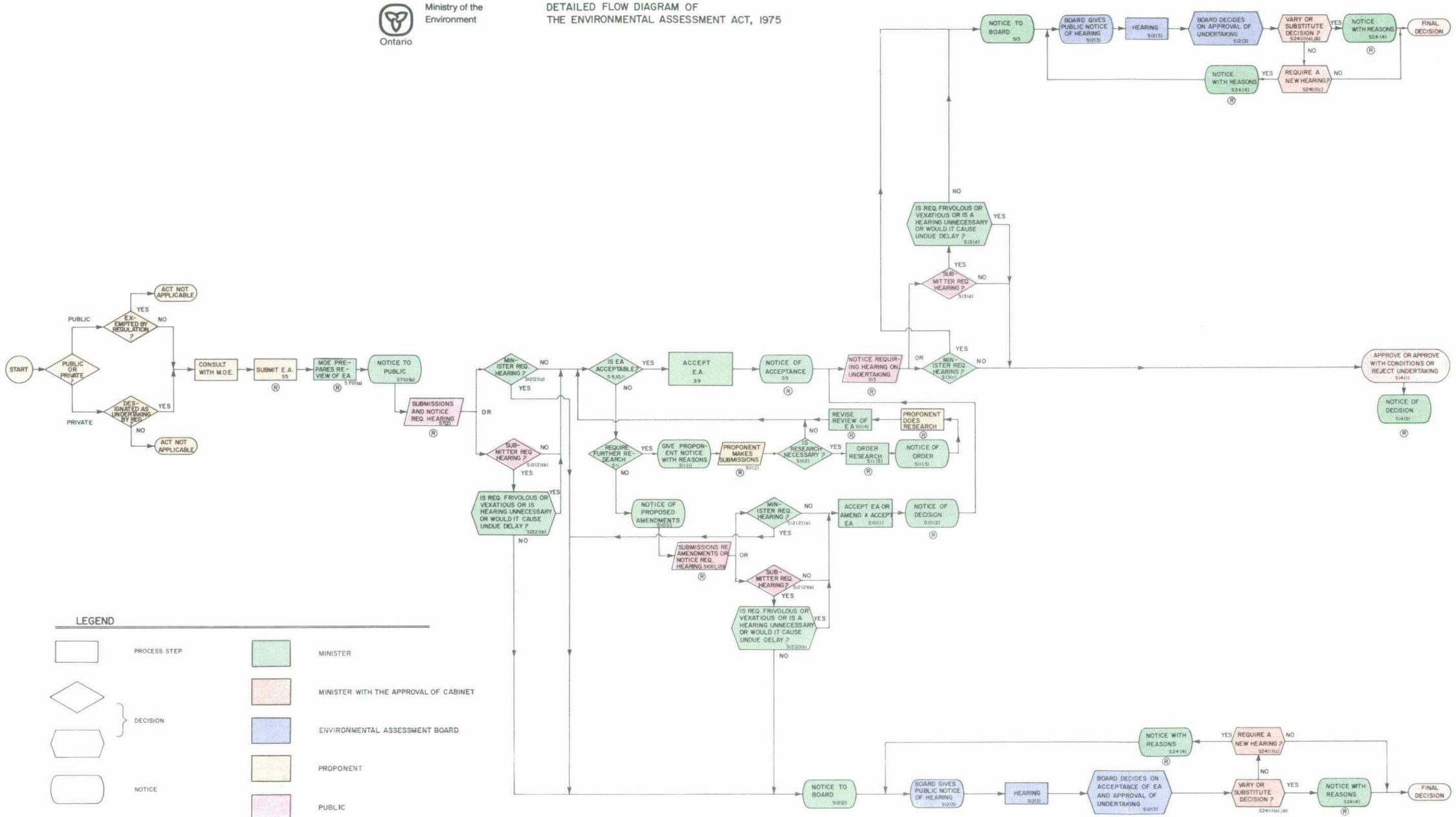
APPENDIX 6

Flow Chart Illustrating

The Environmental Assessment Act, 1975

Ministry of the Environment
Ontario

DETAILED FLOW DIAGRAM OF THE ENVIRONMENTAL ASSESSMENT ACT, 1975



LEGEND

- PROCESS STEP
- DECISION
- NOTICE
- SUBMISSION
- END OF PROCESS
- Ⓡ DOCUMENT INTO RECORD

- MINISTER
- MINISTER WITH THE APPROVAL OF CABINET
- ENVIRONMENTAL ASSESSMENT BOARD
- PROPONENT
- PUBLIC

JULY 1975

APPENDIX 7

PROPOSED GUIDELINES FOR
THERMAL GENERATING STATIONS
(AIR QUALITY)

APPENDIX 7

PROPOSED GUIDELINES FOR THERMAL GENERATING STATIONS

INTRODUCTION

The following guidelines are proposed to assist Ontario Hydro in siting new generating stations and when expanding existing facilities. They consist of a progressive series of design standards which allow Ontario Hydro to make plans based on the anticipated developments of a region. The timing of implementation being such as to meet the standards by the time the more restrictive situations develop.

The guidelines are based on ambient air conditions likely to arise within a radius of 30 miles of a Hydro station.

RECOMMENDATIONS

It is recommended the following design standards for ½ hourly SO_2 concentrations be used by Hydro in siting power stations.

1. In an undeveloped region:	0.2 ppm at ground level
2. In a region containing a residential-commercial-light industrial development within 30 miles of a power station, with a population greater than 40,000:	0.15 ppm at ground level
3. In a region containing large industrial sources (1 or more single sites with emission rates greater than 2000 lb/hr): (Large industrial sources located within 30 miles of a power station should be required to meet 0.2 ppm at any point of impingement.)	0.06 ppm at ground level

CONSIDERATIONS

The following considerations led to these conclusions:

1. The annual average ambient air criteria for SO_2 is 0.02 ppm. This criteria will not be exceeded by a power station with a point of impingement standard of 0.3 ppm considered in isolation, assuming random wind speed and direction.

2. The standard 0.2 ppm for an undeveloped area allows a safety factor to permit limited development and to compensate for the time lag between development of an area and implementation of abatement action on the part of Hydro.

It is approximately the maximum ground level concentration of a 4000 MW station burning 2% sulfur oil with a stack of about 700 feet above grade.

3. Based on an examination of Air Quality data, the average annual concentration of SO_2 in a residential-commercial-light industrial area

. . . 2

(population 40,000) is about 0.015 ppm.

This figure is based on readings from London, Waterloo, Ottawa and North Bay. This figure appears to be confirmed by readings in areas of similar make-up in Toronto when allowance is made for Hydro plants in the area.

4. The average of 0.015 indicates that Hydro should not be allowed to contribute more than 0.005 ppm to the annual air quality figure.

A plume has a spread of some 12 degrees. Assuming an even distribution within the angle, equal frequency of wind and a constant maximum g.l.c. of 0.15 ppm the average concentration at a point is then $(0.15 \times \frac{12}{360}) = 0.005$ ppm.

Since the wind speed does vary, the vast majority of centre line of plume ½ hourly concentrations are expected to be below 0.15. Hence, the effect on an annual basis will most likely be below 0.005.

Calculations using a randomizing process (randoms wind speeds and directions) indicate the average annual concentration will be considerably lower than 0.005 ppm.

These arguments indicate that the 0.15 ppm standard contains a suitable safety factor.

5. The 0.06 ppm standard for industrialized areas is based on two considerations:

(a) Previous work done with the Sarnia model indicated Hydro would have to meet 0.05 ppm at ground level to prevent exceeding the air quality in that area. This situation is as restrictive as any likely to be encountered elsewhere in the reasonably foreseeable future.

(b) With a maximum ground level concentration of 0.06 ppm the annual average encountered should be less than 0.002 ppm. (10% of the annual criterion) and unlikely to produce a measurable effect on ground level concentrations in an industrialised area.

6. At distances of above thirty miles 4000 MW power stations do not contribute significantly to the ambient air quality of developed areas.

FEASIBILITY

The proposed standards are feasible with existing technology. An example calculation was done on a 4000 MW station with stack design as follows:

Twin Stacks

Stack Height: 650 feet

Exit Velocity: 100 f.p.s.

Diameter: 24 feet

Exit Temperature: 265°F

No. 6 oil with a sulfur content of 2%

The table below outlines various alternatives which could be employed to meet the proposed standards.

Max. G.L.C.	% S in fuel with stack unchanged	% collection if 2% fuel is used	Stack Height Required for 2% S	Comments
0.23	2		650	present situation
0.15	1.3	35%	1000	
0.06	0.52	75%	approx 2000	

Tables and graphs amplifying the above table can easily be prepared if necessary.

APPENDIX 8

GUIDELINES FOR THE DESIGN OF SOURCES WHICH EMIT SULPHUR DIOXIDE IN THE SARNIA AREA (AIR QUALITY)

APPENDIX 8

GUIDELINE FOR THE DESIGN OF SOURCES WHICH EMIT SULPHUR DIOXIDE IN THE SARNIA AREA

All sources which emit sulphur dioxide in the Sarnia area shall meet the design conditions of Schedule I of R.R.O.15 (0.3 ppm at the point of impingement).

In addition, for those firms whose plumes are calculated to fall inside the Metro Sarnia area, additional design restrictions shall apply as follows (Metro Sarnia for purposes of this guideline is defined as the area bounded by Campbell Street, Indian Road, London Road, Murphy Road, and the St. Clair River:

1. Ontario Hydro must not exceed a design concentration of 0.05 ppm SO_2

2. Any company which has a Polluting Index* of 10 or greater, or, a total emission exceeding 2000 lb/hr shall not have a design concentration in excess of 0.20 ppm calculated at wind speed of 10 miles/hr or greater, under "C" and "D" meteorological stabilities.

NOTE: *Polluting Index is defined by the following:

$$I = \frac{Q_t}{(H^*)2} \times 10^2$$

Where I = Polluting Index, an index describing an individual industry's tendency to pollute

Q_t = the total SO_2 emitted for a given industry in lbs/hr

H* = the weighted average stack height for a given industry as defined below.

$$H^* = \frac{(q_1h_1 + q_2h_2 + \text{----------} q_nh_n)}{Q_t}$$

And where H* = the weighted average stack height in feet.
q = the SO_2 emission rate for a given stack in lbs/hr^2
h = the height of the specific stack in feet.
n = the total number of emission sources for a given industry.
Q_t = the total SO_2 emitted from n sources by a particular industry in lbs/hr.

APPENDIX 9

GUIDELINES AND CRITERIA FOR WATER QUALITY MANAGEMENT IN ONTARIO

Guidelines and Criteria for Water Quality Management in Ontario

Ontario

Ministry of the Environment

Hon. William G. Newman, Minister

Everett Biggs, Deputy Minister

135 St. Clair Avenue, West, Toronto, Ontario M4V1P5

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INTRODUCTION

In 1967, the Ontario Water Resources Commission announced its Policy Guidelines for Water Quality Control in the Province of Ontario. This publication contains a re-statement of the guidelines and introduces water quality criteria for various uses including public, agricultural and industrial water supply, recreation, aesthetic enjoyment and the propagation of fish and wildlife. The use of water for assimilation and dilution of treated wastes must take into consideration these many desirable uses. Application of the criteria to water uses within the drainage basins of the province, or parts thereof, will lead to the development of water quality standards for the control of water pollution.

Enough water of suitable quality for all of Ontario is the overall objective of the Ministry of the Environment.

WATER QUALITY CRITERIA

The following criteria for water quality are a set of numerical and descriptive characteristics, carefully defined, and applicable to each major water use category such as agriculture; fish, other aquatic life and wildlife; industrial water supply; public water supply; recreation and aesthetics. The criteria are described for use in establishing Water Quality Standards for drainage basins which in turn will be used to determine Effluent Requirements for discharges of wastes and land drainage.

The responsibility for demonstrating that a waste effluent is harmless to water uses in the concentrations to be found in the receiving waters, rests with those producing the discharge. Zones of passage and/or mixing adjacent to outfalls at the limit of which water quality may be critical, will be prescribed by the Ministry.

Reference is frequently made in the Criteria to the Report of the Committee on Water Quality, Federal Water Pollution Control Administration, U.S. Department of the Interior (1968). Acknowledgement of the report is gratefully given in recognition of its basic reference value.

ZONES OF PASSAGE AND MIXING

Mixing zones in the vicinity of outfalls should be restricted as much as possible in extent and should provide for the safe passage of both fish and free-floating and drift organisms. Every precaution should be taken to ensure that at least two-thirds of the total cross-sectional area of a river or stream is characterized by a quality which is entirely favourable to the aquatic community at all times. In most cases this would preclude the use of a diffuser outfall which would distribute effluent uniformly across the river or stream. The water quality standard which defines the acceptable concentration of a substance contained in a waste discharge will apply at the periphery of the mixing zone or other specified sampling location.

Within mixing zones, it should be recognized that toxic wastes which will not evoke an avoidance response on the part of fish or other organisms should not be permitted. Where toxic materials are being discharged it should be assumed that the various components in the waste, regardless of the form in which they are present, may eventually be altered to the most toxic form in the aquatic environment. Adequate treatment of all wastes should be provided and mixing zones should not be considered as a substitute for proper treatment.

STATISTICAL PROBLEMS IN SETTING LIMITS

The systematic surveillance of water and waste sources requires the collection of data to clearly represent the problems being studied. The problems are many and varied. In one case the average condition over a period of time may be required and the question arises over what period shall the average or median be taken; in another, the limit may be a figure that should not be exceeded at any time. If a standard for a certain constituent is "none", the question arises "how small an amount does this mean?" The answers vary with the type of standard and the circumstances governing the fluctuation of the indicator. In ground water problems, only the average over a considerable period of time is significant. Where required in the setting of standards and effluent requirements, definitions of limits will include the applicable sampling conditions, quantitative values and rates of discharge.

1 WATER QUALITY CRITERIA FOR AGRICULTURAL USES (AGR)

Agricultural production requires water of suitable quality for a variety of uses. Criteria for the major uses are given under three headings: Dairy Sanitation, Livestock Watering, and Irrigation.

Requirements for domestic and other farmstead uses and the common requirements for dairy sanitation are given elsewhere in the criteria for Private Water Supplies and Public Water Supplies.

AGR-1 Dairy Sanitation

Modern methods for bulk handling of milk on farms require large volumes of good quality water to ensure a premium product. The quality of water needed for good dairy sanitation requires criteria for certain parameters that are additional to, or more stringent than, those required for private water supplies. These are summarized under the headings "Permissible Criteria" and "Desirable Criteria". They should be used in conjunction with the criteria for public and private water supplies.

Treatment may prove satisfactory in meeting the criteria for certain of the inorganic chemicals such as iron and total hardness.

Waters that meet the desirable microbiological criteria can be used without disinfection; those meeting the permissible criteria require disinfection (chlorination), or chlorination and filtration, before use to reduce bacteria to levels where they will not cause deterioration of the quality of milk. Waters used for dairy sanitation should be sampled and tested at least monthly, in some cases daily, to ensure that they meet the microbiological criteria.

TABLE AGR-1

Water Quality Criteria for Agricultural Uses
Dairy Sanitation

Constituent or Characteristic	Permissible Criteria	Desirable Criteria
Inorganic Chemicals:		
Copper	0.1 mg/l	
Iron	0.1 mg/l	
pH (range)	6.8 to 8.5	
Potassium	20 mg/l	
Total hardness as $CaCO_3$	150 mg/l	100 mg/l
Microbiological:		
Proteolytic and/or Lipolytic bacteria (20°C) (individual results)	500/100 ml	0/100 ml
Yeast		Absent
Mould		Absent
Physical:		Clear
		Colourless
		Good taste

AGR-2 Livestock Watering

The health and productivity of livestock are affected by the quantities of various substances ingested as feed and as water. Accordingly, the amounts of certain substances that can be present without harm in water consumed by livestock will depend in part on the amounts of the same substances that are present in the feed in addition to a number of other factors which include: the daily water requirements and the species, age, and physiological condition of the animals, and the nature and quantities of other constituents of the feed and water.

Animals may be able to tolerate a fairly high level of total dissolved solids or bacteria if they are accustomed to such levels, but may be unable to tolerate a sudden change from waters with low dissolved solids or bacteria to waters with high dissolved solids or bacteria.

In addition to direct effects on the animals, certain substances may contaminate animal products to the point where they will not be acceptable for human consumption.

The variability of the factors that influence the acceptability of water for livestock-watering purposes must be considered when using the water quality criteria. Although the criteria provide a general guide to the quality of water that will be acceptable for most livestock, there may be cases where water of different quality than that indicated by the criteria will be required or acceptable because of the nature, age, or condition of species being raised or because of special rearing conditions or feed components. In such cases, or where the quality of an individual supply is in doubt, the quality should be assessed in relation to the specific use.

Water meeting the permissible criteria will be satisfactory for most livestock under normal rearing conditions. Water meeting the desirable criteria should provide a palatable and safe source for all normal livestock-watering purposes.

TABLE AGR-2
Water Quality Criteria for Agricultural Uses
Livestock

Constituent or Characteristic	Permissible Criteria	Desirable Criteria
General Quality		ideally should meet the desirable criteria for private water supplies.
Inorganic Chemicals:		
Total Dissolved Solids	2500 mg/l	< 500 mg/l
Arsenic	0.05 mg/l	Absent
Cadmium	0.01 mg/l	Absent
Chromium (hexavalent)	0.05 mg/l	Absent
Fluoride	2.4 mg/l	1.2 mg/l
Lead	0.05 mg/l	Absent
Nitrate plus Nitrite (as N)	20 mg/l	< 10 mg/l
Selenium	0.01 mg/l	Absent
Sulphate	1000 mg/l	< 250 mg/l
Radioactivity:		
Radium-226	3 pc/l	< 1 pc/l
Strontium-90	10 pc/l	< 2 pc/l
Gross beta activity in the known absence of strontium-90 and alpha-emitting radionuclides.	1000 pc/l	< 100 pc/l
Microbiological: (1)		
Enterococci (35°C)	< 40/100 ml	0/100 ml
Algae	No heavy growth of blue-green algae	

(1) The supply should be free of barnyard runoff and of effluent contamination from either man or animals. The geometric mean of sample results should not exceed the values given.

AGR-3 Irrigation

The suitability of water for irrigation cannot be defined precisely because the effects of the water on the crop being irrigated depend on many factors. These include: soil types, climatic conditions, irrigation practices, variations in the relation between the concentration and composition of the irrigation water and the soil solution, variations in the tolerance of different plants to the combined or individual constituents in the irrigation water or the soil solution, and the modifying effects of interrelations between and among the constituents. In general, for satisfactory irrigation, soils with poor drainage characteristics require water of higher quality than better drained soils.

In humid areas, excessive concentrations of salts or individual elements will normally be leached from the soil during periods of heavy rainfall or snowmelt before or after the growing season. This leaching action is another factor affecting the quality of water that can be used for irrigation. It may allow the use of water of poorer quality than that listed in these criteria for some crops and conditions without serious detrimental effects. Also through proper timing and adjustment of frequency and volumes of water applied, detrimental effects of poorer quality water may often be mitigated. Good drainage of soil may be a factor of similar importance as the quality of the water used.

The presence of sediment, pesticides, or pathogenic organisms in irrigation water, which may not specifically affect plant growth, may affect the acceptability of the product. Larger sediment particles could lead to plugging of sprinkler nozzles.

Although there are many variations in the quality of water that is suitable for specific irrigation uses, water quality criteria have been assembled as a guide to the quality of water that will meet many irrigation needs. The criteria are listed as permissible and desirable. Water meeting the desirable criteria should be satisfactory for irrigation of most crops in most soil types for long periods of time. Water meeting the permissible criteria, while suitable for many crops, soil and climatic conditions, could result in decreased yields for some crops if it is used repeatedly, unless there is dilution or leaching by precipitation or the application of excess irrigation water under favourable drainage conditions. Special crops or conditions, such as the growing of plants in greenhouses, may require irrigation with water of higher quality than that indicated by the desirable criteria.

The suitability of a given source of water for specific crops, soil types, and climatic conditions should be judged on an individual basis if its suitability has not been demonstrated by practice.

TABLE AGR-3

Water Quality Criteria for Agricultural Uses

Irrigation

Constituent or Characteristic	Permissible Criteria	Desirable Criteria
Physical:		
Temperature		55°F to 85°F
Microbiological: (1)		
Fecal Coliforms (44.5°C)	100/100 ml	0/100 ml
Enterococci (35°C)	20/100 ml	0/100 ml
Total bacteria (20°C)	100,000/100 ml	< 10,000/100 ml
Inorganic Chemicals:		
Aluminum	20.0 mg/l	< 1.0 mg/l
Arsenic	10.0 mg/l	< 1.0 mg/l
Beryllium	1.0 mg/l	< 0.5 mg/l
Boron	0.5 mg/l	0.3 mg/l
Cadmium	0.05 mg/l	< 0.005 mg/l
Chloride	150 mg/l	< 70 mg/l
Chloride—special requirement for tobacco	70 mg/l	< 20 mg/l
Chromium	20.0 mg/l	< 5.0 mg/l
Cobalt	10.0 mg/l	< 0.2 mg/l
Copper	5.0 mg/l	< 0.2 mg/l
Lead	20.0 mg/l	< 5.0 mg/l
Lithium	5.0 mg/l	< 5.0 mg/l
Manganese	20.0 mg/l	< 2.0 mg/l
Molybdenum	0.05 mg/l	< 0.005 mg/l
Nickel	2.0 mg/l	< 0.5 mg/l
pH (range)	4.8 to 9.0	
Residual Sodium Carbonate $=(CO_3^{--}+HCO_3^{-})-(Ca^{++}+Mg^{++})$ expressed as mg eq/l	1.25 mg eq/l	< 1.25 mg eq/l
Selenium	0.05 mg/l	< 0.05 mg/l
Sodium Adsorption Ratio $=\frac{Na^{+}}{\sqrt{\frac{Ca^{++}+Mg^{++}}{2}}}$ expressed as mg eq/l	6	< 4
Total dissolved solids	500 mg/l	< 200 mg/l
Vanadium	10.0 mg/l	< 10.0 mg/l
Zinc	5.0 mg/l	< 5.0 mg/l
Organic Chemicals:		
Pesticides	Insecticides, herbicides, fungicides, and rodenticides must not be present in waters used for irrigation in concentrations that are detrimental to crops, livestock, wildlife or man.	Absent

(1) The geometric mean of sample results should not exceed the values given.

2 WATER QUALITY CRITERIA FOR THE PROTECTION OF FISH, OTHER AQUATIC LIFE AND WILDLIFE (F & W)

The following criteria are considered to be satisfactory for fish, other aquatic life and wildlife. Reference is made to aspects of water quality considered to be most important in the light of current knowledge. Narrative guidelines are offered where quantification is not yet possible.

Dissolved Materials

Dissolved materials should not be added to increase the concentration of dissolved solids by more than one-third of the natural condition of the receiving water, owing to potentially harmful osmotic effects of high concentrations. Dissolved materials that are harmful in relatively low concentrations are discussed in the section "Toxic Substances".

pH, Alkalinity, Acidity

(1) pH should be maintained within a range of 6.5 to 8.5.

(2) To protect the carbonate system, and thus the productivity of the water, acid should not be added in sufficient quantity to lower the total alkalinity to less than 20 mg/l.

Temperature

(1) **General**

Unless a special study shows that discharge of a heated effluent into the hypolimnion of a lake will be desirable, such practice is not recommended and water for cooling should not be pumped from the hypolimnion to be discharged to the same body of water.

The normal daily and seasonal temperature variations that were present before the addition of heat due to other than natural causes should be maintained.

Wherever possible, heated discharges should be located where elevated temperature will enhance public utilization of the water by supporting a wider variety of water uses.

(2) **Great Lakes and Connecting Waters**

(a) Heated discharges are not permitted that may stimulate production of nuisance organisms or vegetation or that are or may become injurious to wildlife, waterfowl, fish or other aquatic life or the growth and reproduction thereof. For each discharge of a heated effluent, acceptable mixing zones will be established on the basis of features and facts pertinent to that specific situation.

(b) Heat may not be discharged in the vicinity of spawning areas or where increased water temperature might interfere with recognized movements of spawning or migrating fish populations.

(3) **Inland Waters**

(a) Heated discharges to inland waters will not be permitted unless it is clearly demonstrated that heated effluents will enhance the usefulness of the water resource without endangering the production and optimum maintenance of wildlife, fish and other aquatic species. It shall be the responsibility of the user to provide evidence to support the acceptability of the discharge under these terms.

(b) Inland trout streams, salmon streams, trout and salmon lakes and the hypolimnion of lakes and reservoirs containing salmonids and other cold water forms should not be warmed.

(c) Heat may not be discharged in the vicinity of spawning areas or where increased temperature might interfere with recognized movements of spawning or migrating fish populations.

Dissolved Oxygen

(1) **Warm-water Biota**

The dissolved oxygen (DO) concentration should be above 5 mg/l at all times, except that in certain situations concentrations may range between 5 and 4 mg/l for short intervals within any 24-hour period provided that water quality is favourable in all other respects.

(2) **Cold-water Biota**

In spawning areas, DO levels must not be below 7 mg/l at any time. Elsewhere, DO concentrations should not be below 6 mg/l. In certain situations, they may range between 6 and 5 mg/l for short intervals within any 24-hour period, provided the water quality is favourable in all other respects.

Carbon Dioxide

The 'free' carbon dioxide concentration should not exceed 25 mg/l.

Oil

Oil, petrochemicals or other immiscible substances that will cause visible films or toxic, noxious or nuisance conditions should not be added to water.

Turbidity

(1) Turbidity associated with waste inputs should not exceed 50 Jackson units in warm-water streams or 10 Jackson units in cold-water streams.

(2) There should be no discharge which would cause turbidities exceeding 25 Jackson units in warm-water lakes or 10 Jackson units in cold-water or oligotrophic lakes.

Settleable Materials

Substances should not be added that will adversely affect the aquatic biota or will create objectionable deposits on the bottom or shore of any body of water.

Colour and Transparency

For effective photosynthetic production of oxygen, it is required that 10 per cent of the incident light reach the bottom of any desired photosynthetic zone in which adequate dissolved oxygen concentrations are to be maintained.

Floating Materials

All floating materials, other than those of natural origin, should be excluded from streams and lakes.

Tainting substances

All materials that will impart odour or taste to fish or edible invertebrates should be excluded from receiving waters at levels that produce tainting.

Radionuclides

Radioactive materials should not be present in natural waters as a consequence of failure to exercise necessary controls of radioactivity releases to keep exposure to a minimum.

Experience has shown that standards established for drinking water assure that people will receive no more than currently acceptable amounts of radioactive materials from aquatic sources and that fish and other aquatic life will not receive an injurious dose of radiation.

Thus, present standards accepted for the protection of fish and other aquatic life are as follows:

	pc/l
Gross beta emitters	1000
Radium-226	3
Strontium-90	10

Where other radioisotopes occur, the significance of the exposure of aquatic species to these forms of radiation should be assessed for each situation, both with respect to potential damage to the organisms themselves and to humans where fish or other edible forms are utilized.

Plant Nutrients and Nuisance Growths

(1) Nutrients from unnatural sources that will stimulate production of algae, nuisance vegetation or offensive slime growths should not be added to water. The addition of sulphates or manganese oxide to a lake should be limited if iron is present in the hypolimnion as these substances may increase the quantity of available phosphorus.

(2) Organic or other materials that will promote an increased zone of anaerobic decomposition within a lake, reservoir or other body of water should not be allowed to enter the water.

(3) The naturally-occurring ratios of nitrogen (particularly NO_3 and NH_4) to total phosphorus, and their amounts, should not be radically changed by the addition of materials from waste sources and land drainage.

Toxic Substances

Toxic substances must not be added to water in concentrations or combinations that are toxic or harmful to human, animal, plant or aquatic life, except where the application of approved substances for the control of nuisance organisms has been authorized by the Ministry (Section 28b, OWRC Act).

The evaluation of toxicity for aquatic organisms is based on use of the TLm or median tolerance limit. This represents the concentration at which half the test organisms will succumb over a given period of exposure such as 24, 48 or 96 hours. It does not, therefore, represent the safe concentration and an application factor is applied to ensure a safe condition, including allowance for sub-lethal effects.

(1) **Substances of Unknown Toxicity**

All effluents containing foreign materials should be considered harmful and not permissible until bioassay tests have shown otherwise. The onus for demonstrating that an effluent is harmless in the concentrations to be found in the receiving waters rests with those responsible for the discharge. Information concerning acceptable bioassay procedures is available from the Ministry.

(2) **Application Factors**

Concentration of materials that are non-persistent (that is, have a half-life of less than 96 hours), or have non-cumulative effects after mixing with the receiving waters, should not exceed 1/10 of the applicable 96-hour TLm value at any time or place based on species representative of local conditions. The 24-hour average of the concentration of these materials should not exceed 1/20 of the TLm value after mixing. For other toxicants, the concentrations should not exceed 1/20 and 1/100 of the TLm value under the aforementioned conditions.

(3) **Additive Effects**

When two or more toxic materials that have additive effects are present at the same time in the receiving water, some reduction is necessary in the permissible concentrations as derived from bioassays on individual substances or wastes. The amount of reduction required is a function of both the number of toxic materials present and their concentrations in respect to the derived permissible concentration. An appropriate means of assuring that the combined

amounts of the several substances do not exceed a permissible concentration for the mixture is through the use of the following relationship:

$$\left(\frac{C_a}{L_a} + \frac{C_b}{L_b} \ldots + \frac{C_n}{L_n} \leq 1\right)$$

where C_a, C_b, ... C_n are the measured concentrations of the several toxic materials in the water and L_a, L_b, ... L_n are the respective permissible concentration limits derived for the materials on an individual basis. Should the sum of the several fractions exceed one, then a local restriction on the concentration of one or more of the substances is necessary.

(4) **Pesticides**

(a) Chlorinated Hydrocarbons:

Any addition of chlorinated hydrocarbon insecticides is likely to cause damage to some desired organisms and their use should be avoided.

(b) Other Chemical Pesticides:

Other pesticides and herbicides gaining access to water can cause damage to desirable organisms and should be used with utmost discretion and caution. Tables F & W-1 and F & W-2 list the 48-hour TLm values of a number of pesticides for various types of fresh water organisms. To provide reasonably safe concentrations of these materials in receiving waters, application factors ranging from 1/10 to 1/100 should be used, with these values depending on the characteristic of the pesticide in question and used as specified in (2) above. Concentrations thus derived may be considered tentatively safe under the conditions specified. TLm values and related application factors are subject to revision as additional bioassay information is obtained for species which may be more representative of local conditions.

(5) **Other Toxic Substances**

(a) ABS: The concentration of ABS should not exceed 1/7 of the 48-hour TLm at any time or place.

(b) LAS: The concentration of LAS should not exceed 1/7 of the 48-hour TLm at any time or place.

(c) ARSENIC: An application factor of 1/100 should be applied to the 96-hour TLm value as a tentative safe concentration for continuous exposure. An environmental level of .01 mg/l should not be exceeded under any circumstances.

(d) AMMONIA: Permissible concentrations of ammonia should be determined by the flow-through bioassay with the pH of the test solution maintained at 8.5, DO concentrations between 4 and 5 mg/l, and temperatures near the upper allowable levels.

(e) CADMIUM: The concentration of cadmium must not exceed 1/500 of the 96-hour TLm concentration at any time or place.

(f) CHROMIUM: The concentration of chromium should not exceed 1/100 of the 96-hour TLm at any time or place.

(g) COPPER: The maximum copper (expressed as Cu) concentration at any time or place shall not be greater than 1/12 of the 96-hour TLm value. The maximum permissible concentration for continuous exposure is between 3 per cent and 7 per cent of the 96-hour TLm.

(h) LEAD: The concentration of lead should not exceed 1/20 of the 96-hour TLm at any time or place and the 24-hour average should not exceed 1/100 of the 96-hour TLm concentration after mixing.

(i) MERCURY: Owing to demonstrated cumulative effects of mercury in fish, and the attendant hazard to other animals, discharges of mercury to water should be avoided.

(j) NICKEL: The concentration of nickel should not exceed 1/50 of the 96-hour TLm concentration at any time or place.

(k) ZINC: The concentration of zinc should not exceed 1/100 of the 96-hour TLm concentration at any time or place.

TABLE F & W-1 INSECTICIDES*

(48-hour TLm values from static bioassay, in micrograms per litre. Exceptions are noted.)

Pesticide	Stream Invertebrate[1] Species	TLm	Cladocerans[2] Species	TLm	Fish[3] Species	TLm	Gammarus Lacustris,[4] TLm
Abate	Pteronarcys californica	100			Brook trout	1,500	640
Aldrin[5]	P. californica	8	Daphnia pulex.	28	Rainbow trout	3	12,000
Allethrin	P. californica	28	D. pulex	21	- do -	19	20
Azodrin					- do -	7,000	
Aramite			D. magna	345	Bluegill	35	100
Baygon[5]	P. californica	110			Fathead	25	50
Baytex[5]	P. californica	130	Simocephalus serrulatus	3.1	Brown t.	80	70
Benzene hexachloride (lindane)	P. californica	8	D. pulex	460	Rainbow t.	18	88
Bidrin	P. californica	1900	D. pulex	600	- do -	8,000	790
Carbaryl (sevin)	P. californica	1.3	D. pulex	6.4	Brown t.	1,500	22
Carbophenothion (trithion)			D. magna	0.009	Bluegill	225	28
Chlordane[5]	P. californica	55	S. serrulatus	20	Rainbow t.	10	80
Chlorobenzilate			S. serrulatus	550	- do -	710	
Chlorthion			D. magna	4.5			
Coumaphos			D. magna	1			0.14
Cryolite			D. pulex	5,000	Rainbow t.	47,000	
Cyclethrin			D. magna	55			
DDD (TDE)[5]	P. californica	1100	D. pulex	3.2	Rainbow t.	9	1.8
DDT[5]	P. californica	19	D. pulex	0.36	Bass	2.1	2.1
Delnav (dioxathion)					Bluegill	14	690
Delmeton (systex)				14	- do -	81	
Diazinon[5]	P. californica	60	D. pulex	0.9	- do -	30	500
Dibrom (naled)	P. californica	16	D. pulex	3.5	Brook t.	78	160
Dieldrin[5]	P. californica	1.3	D. pulex	240	Bluegill	3.4	1,000
Dilan			D. magna	21	- do -	16	600
Dimethoate (cygon)	P. californica	140	D. magna	2500	- do -	9600	400
Dimethrin					Rainbow t.	700	
Dichlorvos[5] (DDVP)	P. californica	10	D. pulex	0.07	Bluegill	700	1
Disulfoten (di-syston)	P. californica	18			- do -	40	70

* From Report of the Committee on Water Quality Criteria, Federal Water Pollution Control Administration, U.S. Department of the Interior (1968).

TABLE F & W-1—continued

Pesticide	Stream Invertebrate[1] Species	TLm	Cladocerans[2] Species	TLm	Fish[3] Species	TLm	Gammarus Lacustris,[4] TLm
Dursban	Peteronareella badia	1.8			Rainbow t.	20	0.4
Endosulfan (thiodan)	P. californica	5.6	D. magna	240	- do -	1.2	64
Endrin[5]	P. californica	0.8	D. pulex	20	Bluegill	0.2	4.7
EPH			D. magna	0.1	- do -	17	36
Ethion	P. californica	14	D. magna	0.01	- do -	230	3.2
Ethyl guthion[5]			D. pulex		Rainbow t.		
Fenthion	P. californica	39	D. pulex	4			
Guthion[5]	P. californica	8	D. magna	0.2	Rainbow t.	10	0.3
Heptachlor[5]	P. badia	4	D. pulex	42	- do -	9	100
Kelthane (dicofel)	P. californica	3000	D. magna	390	- do -	100	
Kepone					- do -	37.5	
Malathion[5]	P. badia	6	D. pulex	1.8	Brook t.	19.5	1.8
Methoxychlor[5]	P. californica	8	D. pulex	0.8	Rainbow t.	7.2	1.3
Methyl parathion[5]			D. magna	4.8	Bluegill	8000	
Morestan	P. californica	40			- do -	96	
Ovex	P. californica	1500			- do -	700	
Paradichlorobenzene					Rainbow t.	880	
Parathion[5]	P. californica	11	D. pulex	0.4	Bluegill	47	6
Perthane			D. magna	9.4	Rainbow t.	7	
Phosdrin[5]	P. californica	9	D. pulex	0.16	- do -	17	310
Phosphamidon	P. californica	460	D. magna	4	- do -	8000	3.8
Pyrethrins	P. californica	64	D. pulex	25	- do -	54	18
Rotenone	P. californica	900	D. pulex	10	Bluegill	22	350
Strobane[5]	P. californica	7			Rainbow t.	2.5	
Tetradifon (tedion)					Bluegill	1100	140
TEPP[5]					Fathead	390	52
Thanite			D. magna	450			
Thimet					Bluegill	5.5	70
Toxaphene[5]	P. californica	7	D. pulex	15	Rainbow t.	2.8	70
Trichlorofon (dipterex)[5]	P. badia	22	D. magna	8.1	- do -	160	60
Zectran	P. californica	16	D. pulex	10	- do -	8000	76

TABLE F & W-2

HERBICIDES, FUNGICIDES, DEFOLIANTS, ALGICIDES*

Pesticide	Stream Invertebrate[1] Species	TLm	Cladocerans[2] Species	TLm	Fish[3] Species	TLm	Gammarus Lacustris,[4] TLm
Ametryne					Rainbow t.	3400	
Aminotriazole							
Aquathol					Bluegill	257	
Atrazine			Daphnia magna	3600	Rainbow t.	12,600	
Azide, potassium					Bluegill	1400	10,000
Azide, sodium					- do -	980	9000
Copper chloride					- do -	1100	
Copper sulphate					- do -	150	
Dichlobenil	Pteronarcys californica	44,000	Daphnia pulex	3700	- do -	20,000	1500
2,4-D PGBEE			D. pulex	3200	Rainbow t.	960	1800
2,4-D BEE	P. californica	1800			Bluegill	2100	760
2,4-D isopropyl					- do -	800	
2,4-D butyl ester					- do -	1300	
2,4-D butyl + isopropyl ester					- do -	1500	
2,4,5-T isooctyl ester					- do -	16,700	
2,4,5-T isopropyl ester					- do -	1700	
2,4,5-T PGBE					- do -	560	
2(2,4-DP) BEE					- do -	1100	
Dalapon	P. californica Very low toxicity		D. magna	6000		Very Low Toxicity	
Dead-X	P. californica	5000	D. pulex	3700	Rainbow t.	9400	5600
DEF	P. californica	2300			Bluegill	36	230
Dexon	P. californica	42,000			Bluegill	23,000	6000
Dicamba					non-toxic		5800
Dichlone			D. magna	26	Rainbow t.	48	11,500
Difolitan	P. californica	150			Channel Cat	31	6500
Dinitrocresol	P. californica	560			Rainbow t.	210	
Diquat					Rainbow t.	12,300	
Diuron	P. californica	2800	D. pulex	1400	- do -	4300	380
Du-ter					Bluegill	33	
Dyrene			D. magna	490		15	
Endothal, copper					Rainbow t.	290	

* From Report of the Committee on Water Quality Criteria, Federal Water Pollution Control Administration, U.S. Department of the Interior (1968).

TABLE F & W-2—continued

Pesticide	Stream Invertebrate[1] Species	TLm	Cladocerans[2] Species	TLm	Fish[3] Species	TLm	Gammarus Lacustris,[4] TLm
Endothal dimethylamine					Rainbow t.	1150	
Fenac, acid	P. californica	70,000			- do -	16,500	
Fenac, sodium	P. californica	80,000	D. pulex	4500	- do -	7500	18,000
Hydram (molinate)	P. californica	3500			- do -	290	
Hydrothol 191					- do -	690	1000
Lanstan (Korax)					- do -	100	5500
LFN					- do -	79	
Paraquat	P. californica Very low toxicity		D. pulex	3700	Very low toxicity		18,000
Propazine					Rainbow t.	7800	
Silvex, PGBEE			D. pulex	2000	- do -	650	
Silvex, isoctyl					Bluegill	1400	
Silvex, BEE					- do -	1200	
Simazine	P. californica	50,000			Rainbow t.	5000	21,000
Sodium arsenite	P. californica Very low toxicity		Simocephalus serrulatus	1400	- do -	36,500	
Tordon (picloram)					- do -	2500	48,000
Trifuralin	P. californica	4200	D. pulex	240	- do -	11	5600
Vernam[5] (vernolate)					- do -	5900	25,000

1 Stonefly bioassay was done at Denver, Colo., and at Salt Lake City, Utah. Denver tests were in soft water (35 mg/l TDS), non-aerated, 60 F. Salt Lake City tests were in hard water (150 mg/l TDS), aerated, 48-50 F. Response was death.

2 Daphnia pulex and Simocephalus serrulatus bioassay was done at Denver, Colo., in soft water (35 mg/l TDS), non-aerated, 60 F. Daphnia magna bioassay was done at Pennsylvania State University in hard water (146 mg/l TDS), non-aerated, 68 F. Respone was immobilization.

3 Fish bioassay was done at Denver, Colo., and at Rome N.Y. Denver tests were with 2-inch fish in soft water (35 mg/l TDS), non-aerated, trout at 55 F.; other species at 65 F. Rome tests were with 2-2½ inch fish in soft water (6 mg/l TA: pH 5.85-6.4), 60 F. Response was death.

4 Gammarus bioassay was done at Denver, Colo., in soft water (35 mg/l TDS), non-aerated, 60 F. Response was death.

5 Becomes bound to soil when used according to directions, but highly toxic (reflected in numbers) when added directly to water.

3 WATER QUALITY CRITERIA FOR INDUSTRIAL WATER SUPPLIES (IWS)

Desired water quality criteria are tabled for the major industrial classifications as follows:

Brewing and Soft Drinks	— IWS-1
Chemical and Allied Products	— IWS-2
Industrial Cooling	— IWS-3
Food Processing	— IWS-4
Electroplating and Metal Finishing	— IWS-5
Iron and Steel	— IWS-6
Petroleum	— IWS-7
Pulp and Paper	— IWS-8
Leather Tanning and Finishing	— IWS-9
Textiles	— IWS-10

While the values listed should not normally be exceeded, these water quality criteria can vary considerably for the same industrial process depending on factors such as the technological age of plant design.

A raw surface water and/or ground water supply which is used by many different industries may not satisfy the widely varying criteria for each use. However, water treatment technology in its present state of development permits the utilization of surface water of literally any available quality to produce water of any desired quality at the point of use in industry.

Most industries located on municipal water supply systems find the quality of water provided to be satisfactory. If the water quality requirements of an industry are such that water of higher quality than that provided by the municipality is required for specific process use, the industry generally accepts the additional costs involved to produce the higher quality water.

TABLE IWS-1

WATER QUALITY CRITERIA FOR THE BREWING AND SOFT DRINK INDUSTRIES

(Unless otherwise indicated, units are mg/l)

Characteristic	Concentration
Alkalinity ($CaCO_3$)	85
pH, units	(1)
Hardness ($CaCO_3$)	(1)
Chloride (Cl)	250(2)
Sulphate (SO_4)	250(2)
Iron (Fe)	0.3(3)
Manganese (Mn)	0.05
Fluoride (F)	1(3)
Dissolved solids	(1)
Organics: carbon chloroform extract (CCE)	0.15(3)
Coliform bacteria, count/100 ml	(3)
Colour, units	5(4)
Taste, threshold number	(4, 5)
Odour, threshold number	(4, 5)

(1) Controlled by treatment for other constituents.
(2) For brewing, value should not exceed 100 mg/l.
(3) Not greater than OWRC Drinking Water Objectives.
(4) In general, public water supplies are given conventional treatment such as coagulation, filtration and chlorination. Any additional requirement for higher quality, for example, deionized water, is the responsibility of the industry. To ensure low organic content, activated carbon treatment is used by industry.
(5) Zero, not detectable by test.

TABLE IWS-2

WATER QUALITY CRITERIA FOR THE CHEMICAL AND ALLIED PRODUCTS INDUSTRIES*

(Unless otherwise indicated, units are mg/l)

Characteristic	Concentration[1]
Alkalinity (as $CaCO_3$)	150
Iron (Fe)	0.3
Manganese (Mn)	0.1
Calcium (Ca)	50
Magnesium (Mg)	25
Bicarbonate (HCO_3)	250
Sulphate (SO_4)	250
Chloride (Cl)	250
Nitrate (NO_3) as N	10
Hardness (as $CaCO_3$)	250
pH, units	6.5-8.5
Dissolved solids	750
Silica	50
Colour, units	20
Suspended solids	15

* Industries include the manufacture of synthetic rubber, plastics, fertilizers, soap and detergents, organic and inorganic chemicals, etc.
(1) Because of the varying requirements of the many uses in the vast number of chemical industries, more stringent restrictions are placed on several of the above noted characteristics. In some cases, any concentration can be handled, while in others, the raw water is accepted as received provided it meets total solids or other limiting values. The above concentrations are suggested guidelines that should be suitable for the majority of uses in the chemical industry.

TABLE IWS-3

WATER QUALITY CRITERIA FOR COOLING WATER*

(Unless otherwise indicated, units are mg/l)

Characteristic	Concentration
Turbidity	50
Hardness	50
Iron	0.5
Manganese	0.5

Cooling waters should have appropriate initial temperatures and should not deposit scale, be corrosive or encourage the growth of slimes. Among the constituents of natural water that may prove detrimental to its use for cooling purposes are hardness, suspended solids, dissolved gases, acids, oil and other organic compounds and slime-forming organisms.

TABLE IWS-4

WATER QUALITY CRITERIA FOR THE FOOD PROCESSING INDUSTRY

(Unless otherwise indicated, units are mg/l)

Characteristic	Concentration
Alkalinity ($CaCO_3$)	150
pH, units	6.5-8.5
Hardness ($CaCO_3$)	150
Chloride (Cl)	250
Sulphate (SO_4)	250
Iron (Fe)	0.2
Manganese (Mn)	0.2
Chlorine (Cl)	(1)
Fluoride (F)	1(2)
Silica (SiO_2)	50
Phenol	(3, 4)
Nitrate (NO_3) as N	10(2)
Nitrite (NO_2) as N	(3)
Organics:	
Carbon chloroform extract (CCE)	0.15
Odour, threshold number	(3)
Taste, threshold number	(3)
Turbidity	(6)
Colour, units	5
Dissolved solids	500
Suspended solids	10
Coliform, count/100 ml	(6)
Total bacteria, count/100 ml	(7)

(1) Process waters for food canning are purposely chlorinated to a selected, uniform level. An unchlorinated supply must be available for preparation of canning syrups.
(2) Waters used in the processing and formulation of foods for babies should be low in fluorides concentration. Also, because high nitrate intake is alleged to be involved in infant illnesses, the concentration of nitrates in waters used for processing baby foods should be low.
(3) Zero, not detectable by test.
(4) Because chlorination of food processing waters is a desirable and widespread practice, the phenol content of intake waters must be considered. Phenol and chlorine in water can react to form chlorophenol, which even in trace amounts can impart a medicinal off-flavour to foods.
(5) Maximum permissible concentration may be lower depending on type of substance and its effect on odour and taste.
(6) As required by Ministry Drinking Water Objectives.
(7) The total bacterial count must be considered as a quality requirement for waters used in certain food processing operations. Other than aesthetic considerations, high bacterial concentration in waters coming in contact with frozen foods may significantly increase the count per gram for the food. Waters used to cool heat-sterilized cans or jars of food must be low in total count for bacteria to prevent serious spoilage due to aspiration of organisms through container seams. Chlorination is widely practised to assure low bacterial counts on container cooling waters.

WATER QUALITY CRITERIA FOR THE ELECTRO-PLATING AND METAL FINISHING INDUSTRIES — IWS-5

Plating-room processes that utilize water include the stripping or pickling operations, cleaning by organic solvents or alkaline solutions, rinsing, and electrochemical plating. For acid stripping or for alkaline cleaning, the quality of water used in the baths is seldom critical, for the added chemicals far outweigh the natural constituents of the water. Hardness of water may be detrimental when soaps or alkaline cleaning agents are used.

For rinsing and for plating, water quality is frequently a major problem. High quality water is of primary importance to assure satisfactory finished work. For decorative plating, water spots and stains may necessitate reworking, wiping, buffing, and other laborious operations. Before the application of any organic corrosion-resistant coating, it is almost a necessity to use demineralized water in the final rinse, in order to achieve adhesion of the coating. A high concentration of dissolved solids is especially detrimental in rinse waters.

In plating baths, iron, aluminum, calcium, magnesium, sodium, potassium, carbonate, bicarbonate, sulphide, sulphite, sulphate, fluoride, chloride, silicate, copper, and lead have been reported to cause difficulties under certain conditions. Considerable evaporation occurs from plating baths and hence the ions present in the make-up water are concentrated to the extent that they are troublesome.

Calcium and magnesium are especially troublesome in plating baths, for they tend to precipitate to form scale on the heated surface or a sludge in the water. There is a probability of these precipitates being included in the electro-deposit, causing pits, porosity, and roughness. Magnesium may also reduce the "throwing power" in chromium baths, but on the other hand, magnesium sulphate is sometimes added to nickel-plating baths to produce softer deposits, to minimize certain types of pitting, and to increase throwing power.

Sodium and potassium are generally not harmful in plating operations, although sodium may cause brittle deposits in nickel baths or reduce the throwing power in chromium solutions. Iron is one of the most troublesome pollutants of many plating operations. In a nickel-sulphate bath, it may cause hazy, streaked, pitted, or brittle deposits; in acid copper solutions, it produces rough deposits; in chromium baths, it reduces the throwing power; in

cadmium cyanide, it causes hazy deposits; in silver cyanide, stained deposits; and in zinc sulphate baths it lowers the plating efficiency and the protective value of the coating.

Among the anions, bicarbonates are detrimental in heated alkaline baths, for they tend to be converted to carbonates and accelerate the precipitation of calcium. Moreover, they buffer the water and require higher dosages of acid or alkali to obtain the desired pH value. Chlorides have been reported to cause rough, modular, iridescent, and crystalline deposits in cadmium, copper, silver, and tin baths respectively. Organic substances reduce chromium, and cause rough, hazy, streaked, coloured, or pitted deposits under various conditions. Colour and turbidity are similarly objectionable.

Abstracted from "Water Quality Criteria", 2nd Edition, State Water Quality Control Board, California, Publication No. 3-A

TABLE IWS-6

WATER QUALITY CRITERIA FOR THE IRON AND STEEL INDUSTRY

(Unless otherwise indicated, units are mg/l)

Characteristic	Quenching, hot rolling, gas cleaning	Cold rolling	Selected rinse waters	
			Softened	Demineralized
Suspended solids	25	10	(2)	(2)
Dissolved solids	(1)	(1)	(1)	(2)
Alkalinity ($CaCO_3$)	(3)	(3)	(3)	(2)
Hardness ($CaCO_3$)	(3)	(3)	100	(2)
pH, units	6.0-9.0	6.0-9.0	6.0-9.0	(3)
Chloride (Cl)	150	150	150	(2)
Dissolved oxygen (O_2)	(4)	(4)	(4)	(4)
Temperature, °F	100	100	100	100
Oil	(1)	(2)	(2)	(2)
Floating material	(1)	(2)	(2)	(2)

(1) Accepted as received if meeting total solids or other limiting values.

(2) Zero, not detectable by test.

(3) Controlled by treatment for other constituents.

(4) Minimum to maintain aerobic conditions.

TABLE IWS-7

WATER QUALITY CRITERIA FOR THE PETROLEUM INDUSTRY

(Unless otherwise indicated, units are mg/l)

Characteristic	Concentration
Silica (SiO_2)	(1)
Iron (Fe)	1
Calcium (Ca)	75
Magnesium (Mg)	25
Bicarbonate (HCO_3)	(1)
Sulphate (SO_4)	(1)
Chloride (Cl)	200
Fluoride (F)	(1)
Nitrate (NO_3) as N	(1)
Dissolved solids	750
Suspended solids	10
Hardness ($CaCO_3$)	350
Noncarbonate hardness ($CaCO_3$)	70
Colour, units	(1)
pH, units	6.0-9.0

(1) Accepted as received if meeting total solids or other limiting values.

TABLE IWS-8

WATER QUALITY CRITERIA FOR THE PULP AND PAPER INDUSTRY

(Unless otherwise indicated, units are mg/l)

Characteristic	Mechanical Pulping	Chemical Pulp and Paper	
		Unbleached	Bleached
Silica (SiO_2)	(1)	50	50
Aluminum (Al)	(1)	(1)	(1)
Iron (Fe)	0.3	1.0	0.1
Manganese (Mn)	0.1	0.1	0.05
Zinc (Zn)	(1)	(1)	(1)
Calcium (Ca)	(1)	20	20
Magnesium (Mg)	(1)	10	10
Sulphate (SO_4)	(1)	(1)	(1)
Chloride (Cl)	500	200	200
Dissolved solids	(1)	(1)	(1)
Suspended solids	(1)	10(2)	10(2)
Hardness ($CaCO_3$)	(1)	100	100
pH, units	6.0-9.0	6.0-9.0	6.0-9.0
Colour, units	30	30	10
Temperature, °F	(1)	(1)	95

(1) Accepted as received if meeting total solids or other limiting values.

(2) No gritty or colour-producing solids.

TABLE IWS-9

WATER QUALITY CRITERIA FOR THE LEATHER TANNING AND FINISHING INDUSTRY

(Unless otherwise indicated, units are mg/l)

Characteristic	Tanning Processes	General Finishing Processes	Colouring
Alkalinity ($CaCO_3$)	(1)	130	130
pH, units	6.0-8.0	6.0-8.0	6.0-8.0
Hardness ($CaCO_3$)	150	(2)	(3, 4)
Calcium (Ca)	60	(2)	(3, 4)
Chloride (Cl)	250	250	(5)
Sulphate (SO_4)	250	250	(5)
Iron (Fe)	0.3	0.3	0.1
Manganese (Mn)	0.2	0.2	0.01
Organics:			
Carbon chloroform extract (CCE)	(5)	0.2	(3)
Colour, units	5	5	5
Coliform bacteria, count/100 ml	(6)	(6)	(5)
Turbidity	(3)	(3)	(3)

(1) Accepted as received if meeting total solids or other limiting values.
(2) Lime softened.
(3) Zero, not detectable by test.
(4) Demineralized or distilled water.
(5) Concentration not known.
(6) OWRC Drinking Water Objectives.

TABLE IWS-10

WATER QUALITY CRITERIA FOR THE TEXTILE INDUSTRY

(Unless otherwise indicated, units are mg/l)

Characteristic	Sizing Suspension	Scouring	Bleaching	Dyeing
Iron (Fe)	0.3	0.1	0.1	0.1
Manganese (Mn)	0.05	0.01	0.01	0.01
Copper (Cu)	0.05	0.01	0.01	0.01
Dissolved solids	100	100	100	100
Suspended solids	5	5	5	5
Hardness ($CaCO_3$)	25	25	25	25
pH, units:				
Cotton	6.5-10.0	9.0-10.5	2.5-10.5	7.5-10.0
Synthetics	6.5-10.0	3.0-10.5	(1)	6.5-7.5
Wool	6.5-10.0	3.0-5.0	2.5-5.0	3.5-6.0
Colour, units	5	5	5	5

(1) Not applicable.

4 CRITERIA FOR PUBLIC WATER SUPPLIES (PWS)

Criteria are given for public and private supplies from both surface and ground water sources.

Public supplies include water systems operated by municipalities, public utilities, industries, commissions, commercial establishments, etc. where competent operation of the water supply system is provided.

Private supplies include water systems operated by personnel who may not have the necessary technical or mechanical expertise.

PWS-1 Criteria for Public Surface Water Supplies

Since treatment processes exist which can convert any raw water (with a few minor exceptions) to potable water, it is necessary to define a commonly accepted treatment system which can produce a potable water at a reasonable cost. For the purposes of these criteria, such a system has been defined to consist of coagulation, flocculation, sedimentation and rapid sand filtration; the use of chemicals is restricted by definition to the commonly used coagulants and chlorine for disinfection.

Two types of criteria have been established, namely the Permissible Criteria and the Desirable Criteria (Table PWS-1). Waters meeting both of these criteria are acceptable for treatment by the defined treatment process stated above. Waters meeting the Desirable Criteria provide for a greater margin of safety.

It should be borne in mind that the values given under the Permissible Criteria cannot be considered as maximum single sample values. These criteria should not be exceeded over substantial portions of time. If this should occur, then it will become necessary to determine the cause and initiate corrective action. The frequency and variety of sampling should be based on the findings of a comprehensive pollution survey.

TABLE PWS-1

WATER QUALITY CRITERIA FOR PUBLIC SURFACE WATER SUPPLIES

(Unless otherwise indicated, units are mg/l)

Constituent or Characteristic	Permissible Criteria	Desirable Criteria
Physical		
Colour (platinum-cobalt)	75 units	< 5 units
Odour	Readily removable by defined treatment	Absent
Turbidity	— do —	Absent
Temperature	85°F	Pleasant tasting
Inorganic Chemicals		
Ammonia	0.5 (as N)	< 0.01
Arsenic*	0.05	Absent
Barium*	1.0	Absent
Boron*	1.0	Absent
Cadmium*	0.01	Absent
Chloride*	250	< 25
Chromium* (hexavalent)	0.05	Absent
Copper*	1.0	Virtually absent
Dissolved Oxygen	≥ 4 (monthly mean) ≥ 3 (individual sample)	Near saturation
Fluoride*	See footnote (1)	1.0
Hardness*	Acceptable levels will vary with local hydrogeologic conditions and consumer acceptance.	
Iron (filterable)	0.3	Virtually absent
Lead*	0.05	Absent
Manganese* (filterable)	0.05	Absent
Nitrate plus Nitrite*	10 (as N)	Virtually absent
pH range	6.0 - 8.5 units	Least amount of interference with treatment process
Phosphorus* (phosphates)	Not encourage growth of algae or interfere with treatment process	
Selenium*	0.01	Absent
Silver*	0.05	Absent
Sulphate*	250	< 50
Total Dissolved Solids* (filterable residue)	500	< 200
Uranyl Ion*	5	Absent
Zinc*	5	Virtually absent
Organic Chemicals(2)		
Carbon chloroform extract* (CCE)	0.15	< 0.04
Cyanide*	0.20	Absent
Methylene blue active substances*	0.5	Virtually absent
Oil and grease*	Virtually absent	Absent

Table PWS-1 (cont.)

Constituent or Characteristic	Permissible Criteria	Desirable Criteria
Pesticides:		
Aldrin*	0.017	— do —
Chlordane*	0.003	— do —
DDT*	0.042	— do —
Dieldrin*	0.017	— do —
Endrin*	0.001	— do —
Heptachlor*	0.018	— do —
Heptachlor epoxide*	0.018	— do —
Lindane*	0.056	— do —
Methoxychlor*	0.035	— do —
Organic phosphates plus carbamates*	0.1	— do —
Toxaphene*	0.005	— do —
Herbicides:		
2,4-D plus 2,4,5-T, plus 2,4,5-TP*	0.1	— do —
Phenolic Substances*	Virtually absent	— do —
Radioactivity	(pc/l)	(pc/l)
Gross beta*	1,000	< 100
Radium-226*	3	< 1
Strontium-90*	10	< 2
Microbiological (3)		
Coliform organisms (at 35°C)	5,000/100 ml	< 100/100 ml
Fecal coliforms (44.5°C)	500/100 ml	< 10/100 ml
Fecal streptococci (35°C)	50/100 ml	< 1/100 ml
Total Bacteria (20°C)	100,000/100 ml	< 1,000/100 ml
Clostridia (in water) (35°C)	50/100 ml	0/100 ml

* The defined treatment process has little effect on the constituents.

(1)

Annual Avg. of Max. Daily Air Temp. F.	Recommended Limit for Fluoride mg/l
50.0 to 53.7	1.7
53.8 to 58.3	1.5
58.4 to 63.8	1.3

(2) Organic chemicals should not be present in concentrations as to cause adverse tastes and odours which cannot be removed by the defined treatment and/or by chlorination only.

(3) A monthly geometric mean of the results of raw water samples collected on a weekly basis (minimum of one sample per week) should be less than the numbers given under the Permissible Criteria column. These figures do not imply a relationship between bacterial groups.

PWS-2 Criteria for Public Ground Water Supplies

With the exception of dissolved oxygen, fluorides and microbiological criteria, the water quality criteria for surface water apply to ground water supplies.

For fluorides, hydrogen sulphide and pollution indicator organisms, the following apply to ground water supplies:

	Permissible Criteria	Desirable Criteria
	(Unless otherwise indicated, units are mg/l)	
Fluoride	2.4	1.0
Hydrogen Sulphide	0.1	Absent
Pollution Indicator Organisms	Coliform and other pollution indicator organisms should be virtually absent from all ground water supplies.	

It is considered desirable to provide the maximum of treatment — chlorination — for all ground water supplies. This measure ensures that nuisance organisms which exist in virtually all waters do not get the opportunity to develop a foothold in a water distribution system and thereby create objectionable conditions.

PWS-3 Criteria for Private Water Supplies

The raw water available to private supplies such as individual dwellings, cottages, farms, etc, must be of such quality that it can be used in the raw state or be made acceptable for use with a minimum of treatment limited to disinfection, filtration and/or softening. Economic considerations and lack of technical/mechanical expertise will prohibit the use of raw water supplies that require extensive treatment.

Some surface supplies have turbidities, colour and other undesirable constituents in excess of what can be used effectively in home or farm operations. Some ground water supplies (wells and springs) harbour objectionable gases, nuisance bacteria, in addition to having high concentrations of iron and being highly mineralized. The initial approach in establishing a private water supply should be to explore the ground water potential from the aspects of both quality and quantity. In many instances, deficiencies in ground water quality can be offset at a relatively low cost compared to that for surface waters.

Criteria for private water supplies are identical to the surface water criteria for public water supplies, with the exception of fluorides, hydrogen sulphide, physical and microbiological characteristics. For fluorides and hydrogen sulphide, the applicable criteria appear in Section PWS-2.

Physical Criteria:

The water supply should be substantially free from substances offensive to sight, taste or smell. Threshold odour values in excess of three units are generally considered objectionable.

Colour in the water supply should not exceed 15 units (platinum-cobalt scale).

Turbidity should be less than five units. Turbidities of up to 20 units may be removed relatively easily by sand or diatomaceous earth filters.

Microbiological Criteria:

Microorganisms	Permissible Criteria		Desirable Criteria
	Chlorination only	Chlorination & Filtration	No Treatment
Coliforms (35°C)	100/100 ml	400/100 ml	0/100 ml
Fecal Coliforms (44.5°C)	10/100 ml	40/100 ml	0/100 ml
Enterococci (35°C)	1/100 ml	4/100 ml	0/100 ml
Total Bacteria (20°C)	1000/100 ml	4000/100 ml	10/100 ml
Clostridia (in water) (35°C)	0/100 ml	4/100 ml	0/100 ml

Raw water samples should be collected at least monthly. The Geometric Mean of sample results should not exceed the values given in the table above.

5 CRITERIA OF WATER QUALITY FOR AESTHETICS AND RECREATION (A & R)

All surface waters should be capable of supporting life forms of aesthetic value. The positive aesthetic and recreational values of water should be attained through continuous enhancement of water quality. Surface waters should be of such quality as to provide for the enjoyment of recreational activities such as hunting and fishing which are based on the utilization or consumption of fish, waterfowl and other forms of life.

The aesthetic and recreational values of unique or outstanding waters should be recognized and protected by development of appropriate water quality standards for each individual case. To retain or establish unspoiled wilderness values, it may be necessary to control access by mechanized methods of transportation.

General criteria for recreation and aesthetic use and specific criteria for total body contact recreation follow:

A & R-1 General Criteria for Recreation and Aesthetics

Surface waters should be free of substances attributable to discharge of waste or land drainage which may impair aesthetic or recreational use, as follows:

(1) Materials that will settle to form objectionable deposits.

(2) Floating debris, oil, scum and other matter.

(3) Substances producing objectionable colour, odour, taste or turbidity.

(4) Materials, including radionuclides, in concentrations or combinations which are toxic or which produce undesirable physiological responses in humans, fish and other life and plants.

(5) Substances, including nutrients, and conditions, including temperature, or combinations thereof in a degree or concentration which produces undesirable types or abundance of aquatic life.

A & R-2 Criteria for Total Body Contact Recreation

Surface waters for total body contact recreational use should be free of substances attributable to discharge of waste or land drainage as follows:

(1) Materials which will cause the pH to change beyond the range 6.5-8.3.

(2) Materials which will obscure visibility in the water. In designated swimming and diving areas, clarity should be such that a Secchi Disc on the bottom is visible from the surface.

(3) Conditions which will cause the water temperature to exceed 85°F.

(4) Microbiological Criteria
Water used for body contact recreational activities should be free from pathogens including any bacteria, fungi or viruses that may produce enteric disorders or eye, ear, nose, throat and skin infections. Where ingestion is probable, recreational waters can be considered impaired when the coliform, fecal coliform, and/or enterococcus geometric mean density exceeds 1000, 100 and/or 20 per 100 ml respectively, in a series of at least ten samples per month, including samples collected during weekend periods.

If these criteria are exceeded, it will become necessary to determine the cause and initiate corrective action.

When evaluating a given area of water for recreational use, the appropriate numbers of samples, and the choice of tests to be performed should be determined by consultation between sampler and analyst, prior to sampling. An effort should be made to increase utilization of the fecal coliform and enterococcus tests since these presently appear to be the more relevant guides to the bacterial quality of bathing waters.

GLOSSARY OF TERMS

Bioassay — A controlled laboratory procedure which subjects live aquatic organisms to various environmental stresses.

Effluent Requirements — Numerical or verbal descriptions of the quality of a waste or drainage effluent at the point of discharge to a receiving water body, land disposal site or waste disposal well.

Eutrophication — The increase in the nutrient content of the natural waters of a lake or other body of water.

Geometric Mean — The nth root of the product of n observations. The equation for the geometric mean (G_x) can be expressed as:

$$G_x = \sqrt[n]{X_1 . X_2 . X_3 \ldots\ldots\ldots X_n}$$

$$\text{or } G_x = \text{antilog} \left(\frac{\log X_1 + \log X_2 + \ldots . \log X_n}{n} \right)$$

Land Drainage — Water that has drained from the land surface naturally or through man-made drainage systems.

Milligrams per Litre (mg/l) — A unit of measure expressing the concentration of a substance in a solution.

Milligram equivalents per litre (mg. eq/l) — A unit indicating the chemical equivalence of ions; derived by dividing the concentration of an ion in milligrams per litre by the combining weight of that ion.

Note: combining weight = $\frac{\text{atomic or molecular weight of ion}}{\text{ionic charge}}$

Oligotrophic — Waters with a small supply of nutrients and hence a small organic production; usually having abundant dissolved oxygen at all depths.

Photosnythetic (adj.) — Relating to the process by which the chlorophyl-bearing cells of green plants convert carbon dioxide (CO_2) and water (H_2O) into sugar ($C_6H_{12}O_6$) and oxygen (O_2) in the presence of light.

Raw Water — Surface or ground water, prior to treatment.

Waste — Liquid carrying unwanted materials or compounds resulting from human activities or enterprises to a point of discharge. The mixture may or may not have received treatment.

Water Quality Criteria — Numerical or verbal descriptions of the quality of water required for particular uses.

Water Quality Standards — Numerical or verbal descriptions of the quality of water required for a variety of uses in a given drainage system.

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APPENDIX 10

CRITERIA AND GUIDELINES - 1971

(WATER QUALITY)

APPENDIX 10

CRITERIA AND GUIDELINES - 1971

(i) Water Quality Criteria for the protection of fish, other aquatic life and wildlife.

Temperature

(a) General

Unless a specific study shows the discharge of a heated effluent into the hypolimnion of a lake will be desirable, such practice is not recommended and water for cooling should not be pumped from the hypolimnion to be discharged to the same body of water.

The normal daily and seasonal temperature variations that were present before the addition of heat, due to other than natural causes should be maintained.

Wherever possible, heated discharges should be located where elevated temperature will enhance public utilization of the water by supporting a wider variety of water uses.

Great Lakes and Connecting Waters

(a) Heated discharges are not permitted that may stimulate the production of nuisance organisms or vegetation or that are or may become injurious to wildlife, waterfowl, fish or other aquatic life or the growth and reproduction thereof. For each discharge of a heated effluent, acceptable mixing zones will be established on the basis of features and facts pertinent to that specific situation.

(b) Heat may not be discharged in the vicinity of spawning areas or where increased water temperatures might interfere with recognized movements of spawning or migrating fish populations.

(ii) Guidelines to Ontario Hydro for Control of Heated Discharges to the Great Lakes System

In addition to the temperature criteria contained in the section "Water Quality Criteria for the Protection of Fish, Other Aquatic Life and Wildlife" in the booklet "Guidelines and Criteria for Water Quality Management in Ontario", the Ministry of the Environment requires the following guidelines to be met for generating stations located on the shores of the Great Lakes:

1. Temperature Difference

The temperature difference between the intake and discharge water shall not exceed 20oF. for new stations, however, in special circumstances, local conditions may dictate a significantly lower temperature difference than 20oF.

2. Temperature

Notwithstanding the allowable temperature difference outlined in (1) above, the temperature of the receiving body of water in the thermal plume should not exceed 85oF. at any time of the year except in the immediate restricted inner area of the mixing zone around the cooling water outfall. At no time should the (exit) temperature of the discharge water exceed 90oF.

3. Method of Disposal

Onshore discharge of the thermal plume over the top surface layers of the receiving body of water is preferred to maximize heat loss to the atmosphere through convection, evaporation and radiation.

4. Zones of Passage

Thermal plumes must be directed in such a manner as to not create thermal barriers to fish and other aquatic organisms across rivers or to entrances to other bodies of water, and especially so during spawning runs.

5. Alternative Cooling Facilities

In those instances where significant effects can be clearly predicted, alternate cooling facilities are to be employed.

In those instances where potential harmful effects that may arise, cannot be clearly predicted, generating stations should be initially designed so that alternate cooling facilities can be added at such time as evidence indicates significant adverse effects.

6. Circulation Patterns

Cooling water discharges should not alter a local existing circulation pattern such that other water uses are seriously depreciated or spawning and fishing grounds are affected.

APPENDIX 11

CRITERIA AND GUIDELINES FOR

WATER HEAT DISCHARGE TO THE GREAT LAKES SYSTEM - 1975

APPENDIX 11

Ontario Ministry of the Environment

CRITERIA AND GUIDELINES FOR WASTE HEAT DISCHARGE TO THE GREAT LAKES SYSTEM - 1975

I. Water Quality Criteria for the Protection of Fish, Other Aquatic Life and Wildlife

Temperature

1. General

Unless a specific study shows the discharge of a heated effluent into the hypolimnion of a lake will be desirable, such practice is not recommended, and water for cooling should not be pumped from the hypolimnion to be discharged to the same body of water.

The normal daily and seasonal temperature variations that were present before the addition of heat, due to other than natural causes, should be maintained.

Wherever possible, heated discharges should be located where elevated temperature will enhance public utilization of the water by supporting a wider variety of water uses.

2. Great Lakes and Connecting Waters

(a) Heated discharges are not permitted that may stimulate the production of nuisance organisms or vegetation or that are or may become injurious to wildlife, waterfowl, fish, or other aquatic life or the growth and reproduction thereof. For each discharge of a heated effluent, acceptable mixing zones will be established on the basis of features and facts pertinent to that specific situation.

(b) Heat may not be discharged in the vicinity of spawning areas or where increased water temperatures might interfere with recognized movements of spawning or migrating fish populations.

II. Guidelines for Control of Heated Discharges to the Great Lakes System

In addition to the temperature criteria for the protection of fish, other aquatic life and wildlife in the booklet "Guidelines and Criteria for Water Quality Management in Ontario", and bearing in mind that these criteria may be

revised at any time, the Ministry of the Environment requires the following guidelines to be met for thermal discharges from generating stations and other sources to be operated on the shores of the Great Lakes which commence operation after January 1, 1982.

1. Temperature

The temperature of the discharge water shall not exceed the natural ambient lake temperature at that location by more than 10oC. (18oF.). However, in special circumstances, local conditions may require a significantly lower temperature difference than 10oC. (18oF.). Potential dischargers are to apply to the Ministry of the Environment for guidance as to the allowable temperature rise for each specific site under consideration for location of a thermal discharge. At the same time, the natural lake ambient for each time of the year will be established.

2. Discharge Temperatures Permitted

The maximum temperature of the receiving body of water, at any point in the thermal plume, should not exceed 30oC. (86oF.) or a temperature of lake ambient temperature (as outlined in 1. above) plus 10oC. (18oF.) or the allowed temperature difference, whichever is the lesser temperature. At no time should the exit temperature of the discharge water exceed 32oC. (89.6oF.). These maximum temperatures are to be measured on a mean daily basis from continuous records.

3. Method of Water Removal

Water removal for cooling water use shall be in such a manner as to minimize environmental damage through entrapment and destruction of fish and other aquatic life and the entrainment of fish and other aquatic life in the cooling water intake system.

4. Method of Disposal

Discharge of waste heat shall be into such areas and locations and in such quantities as may be allowed by the Ministry of the Environment on a case-by-case basis. Any such allowed discharge of waste heat shall not be directed into the littoral zone of the lake at a particular site unless a demonstration to the satisfaction of the Ministry of the Environment by scientific studies approved by it can show a level of protection for the littoral zone and

associated lake ecosystem acceptable to the Ministry of the Environment. Discharge methods will be required which will reduce the mixing zone so as to minimize conflict with other water uses, the natural environment, and the lake ecosystem. A discharge of waste heat should not affect the water temperature at any water intake, particularly a cooling water intake. Two or more thermal discharges should not be located so that their plumes combine.

5. Contaminants in Discharge Water

The use of cooling water for any waste disposal shall not be permitted except at such levels as determined by the Ministry of the Environment on a case-by-case basis. Substances used as biocides in condenser cleaning will only be permitted in the cooling water at residual levels to be approved by the Ministry of the Environment on a case-by-case basis.

6. Alternative Cooling Facilities

As previously established due to the unique features of Lake Erie, discharges located there will be equipped with alternative cooling facilities, rather than relying on a once-through cooling system.

In other instances where effects considered to cause significant deterioration of the environment can be clearly predicted, alternative cooling facilities are to be employed.

In those instances where potential effects which might result in a significant environmental degradation may arise but cannot be clearly predicted, thermal discharges shall be designed so that alternative cooling facilities can be added if, at a future time, evidence indicates significant adverse effects.

7. Circulation Patterns

Cooling water discharges shall not alter the local existing circulation pattern such that other water uses, spawning or fishing grounds are affected.

APPENDIX 12

SITE SELECTION STUDY GUIDELINES FOR THERMAL AND RELATED IMPACTS OF PROPOSED ELECTRICAL GENERATING STATIONS - WATER RESOURCES ASPECTS - GREAT LAKES

APPENDIX 12

Site Selection Study Guidelines for Thermal and Related Impacts of Proposed Electrical Generating Stations - Water Resources Aspects - Great Lakes

In order to prepare the detailed Environmental Assessment documents necessary for site selection of locations for electricity generating stations, investigations of the environmental and ecological impact of the withdrawal, heating and discharge of cooling water and associated discharges to the waters of the Province of Ontario will be required.

The following guidelines are intended to serve as indicators of the desirable studies only. Specific locations may well require that additional topics be investigated. These will be indicated in meetings with the proponent and Ontario Ministry of the Environment staff. The details of all studies will be submitted to the Ministry of the Environment for approval before they are begun.

It is intended that the following studies will be replicated at each of the possible generating station sites under consideration in a region. The environmental assessment prepared for the identification and selection of a single site for power generation will contain a detailed comparative analysis of the environmental aspects of all sites under consideration. All sites will be studied in and reported onto the same degree of detail. Environmental reasons for site selection should be supported by carefully assessed data.

The studies are to be conducted so that the information obtained provides an accurate and quantitative description of the phenomena under investigation. Specific studies should be undertaken to evaluate the variability of data obtained and the precision to which a predicted or measured effect is estimated or determined. Analytical and other measurements and analysis should be those known to give a high degree of reliability under the conditions of study. Thorough summaries should be made of the pertinent scientific and technical literature.

Studies should be conducted so that a quarterly review of the data is made and submitted by the investigator. Problems indicated by this review should be communicated to the Ministry of the Environment for possible advice and assistance.

Investigators should bear in mind that the emphasis is on delineating the effects of the withdrawal and the discharge of heated water and other substances in connection with the operation of thermal electric generating stations. Some consideration should be given to the possible effects of construction activities. Also a certain amount of general information may, however, be required to relate the proposed development to existing or proposed needs of other water users in the study area. The on-site and associated laboratory studies for each proposed station site should concentrate on the question of delineating the possible environmental problems which would result if a thermal electric station were located at each site. Some emphasis should be placed during analysis of survey data and laboratory experiments on their application to the station design to minimize possible adverse effects.

Physical Studies

1. Continuous measurements of those meteorological parameters which affect thermal plume dispersal and cooling.
2. The lake bottom topography, sediment types, and locations.
3. The thermal regime at all times of the year for the possible water intake and discharge areas (including upwelling phenomena).
4. The currents and their relationships to other physical parameters for the potential intake and discharge areas.
5. The amount and quality of littoral drift and erosion or sedimentation in the nearshore area.
6. The hydraulic characteristics of the possible water intake structures including screenhouses and underwater structures and their locations.
7. The hydraulic characteristics of the possible water discharge structures and their possible locations.
8. The natural extent of shoreline ice
9. Detailed assessment should be made, with reference to mathematical models, physical models and information from other generating stations, of the possible extent, depth, direction and effects of the various possible thermal plumes which could be produced from a plant at the site taking into consideration the information in sections 1 - 8.

Chemical Studies

1. The following water quality survey parameters should be measured at frequencies to be determined on a case by case basis.

Dissolved O_2
pH
Clarity
Alkalinity
BOD
Nitrogen, Organic
Nitrogen, Ammonia
Nitrogen, Nitrate
Nitrogen, Nitrite
Phosphorus, Soluble
Phosphorus, Total
Silica
Solids, Total Dissolved

2. If nuclear power is to be considered, a determination of the present levels of radioactivity in the ecosystem and the likely pathways of concentration of probable effluents should be determined.
3. A complete assessment of the possible impact of the chemical and radiological wastes which may be discharged by a generating station on the site should be made. This would include condenser biocides, (such as chlorine), boiler blowdown, and water treatment wastes, radioactive wastes, sanitary wastes, cooling tower blowdown discharges, coal or oil leakage or drainage, etc. Treatment proposals and expected levels of discharge of these substances should be given and their possible fate in the aquatic ecosystem should be studied.

Biological Studies

The biological studies should establish baseline information on all trophic levels of the aquatic ecosystem and assess, with relation to the scientific literature and other information available (supplemented by special studies which may be required), the possible effects of thermal generation at that site. Consideration should also be given to the possibility of far-field or lake-wide effects which may be initiated by local effects.

The biological studies should consider the following topics:

1. Aquatic macrophytes
2. Microbiology (bacteriology)
3. Phytoplankton
4. Periphyton
5. Zooplankton
6. The psammo-littoral community
7. Benthic macroinvertebrates
8. Planktonic macroinvertebrates
9. Fish
10. Amphibians and reptiles
11. Waterfowl
12. Water living mammals

These topics should be studied with emphasis on:

1. Species biology
2. Seasonal population levels
3. Movements (e.g. spawning runs)
4. Reproduction
5. Food web relationships
6. Substrate relationships
7. Temperature requirements at various times of the year.
8. The key factors controlling population levels.

These studies should be supplemented by special studies on particular topics such as:

1. Potential impingement of screenable fish at cooling water intakes.
2. Potential entrainment problems with the passage of phytoplankton, zooplankton, fish and fish eggs, through the cooling waters system of the plant. The effect of various condenser ΔT's should be considered.
3. Entrainment of organisms in any tempering water or in the sides of the thermal plume.

The possible effects of the generating station on other uses of the water body for:

1. Recreation
2. Sport fishing
3. Commercial fishing
4. Other water uses (e.g. waste assimilation, water supply, industrial use) should be considered and documented.

Waste Heat Utilization

In line with the recommendations of the Ontario Task Force on the Human Environment, the beneficial utilization of waste heat should receive consideration in planning each generating station.

APPENDIX 13

ONTARIO MINISTRY OF THE ENVIRONMENT

EFFLUENT GUIDELINES

AND

RECEIVING WATER QUALITY OBJECTIVES

FOR THE

MINING INDUSTRY

IN

ONTARIO

1973

The "Mine-Mill Effluent Guidelines" presented in Table 1 represent the minimum degree of treatment that is necessary at existing and future mining operations in the Province of Ontario regardless of the available dilution in the receiving water. More stringent mine-mill effluent guidelines will be defined by the Ontario Ministry of the Environment for a specific mining property or for a specific mining area should such action be warranted.

Each new mining operation in the Province of Ontario will receive an individual set of mine-mill effluent guidelines from the Ontario Ministry of the Environment. Each set of mine-mill effluent guidelines will reflect as accurately as possible the environmental and other factors that influence the mining development in question.

Specific mine-mill effluent guidelines will be defined, on an individual basis, by the Ontario Ministry of the Environment for all existing mining operations. These guidelines will be influenced by local environmental and other considerations.

The "Mine-Mill Effluent Guidelines" of the Ontario Ministry of the Environment will be influenced by positive mine-mill waste treatment practices such as wastewater re-use.

The "Receiving Water Quality Objectives" presented in Table 2 take into consideration existing and potential uses of the receiving water.

The "Receiving Water Quality Objectives" will apply at the periphery of a mixing zone which will be defined for each mining operation on the basis of the hydrological, physical, chemical and biological characteristics of the receiving water.

The "General Water Quality Objectives" presented in Table 3 relate to the aesthetic quality of the receiving watercourse including the mixing zone.

TABLE 1

MINE-MILL EFFLUENT GUIDELINES

METALS

The total concentration of any individual metal* (excluding calcium, magnesium, potassium and sodium) in a mine-mill effluent should not exceed 1 milligram per litre (mg/litre) unless otherwise indicated by the Ontario Ministry of the Environment.

In addition, the cumulative concentration of copper, lead, zinc and nickel in a mine-mill effluent

should not exceed 1 milligram per litre.

* At any mine-mill location, cadmium and mercury should not be discharged in mine-mill effluents in concentrations that are in excess of natural cadmium and mercury background concentrations found in the immediate area of the mine-mill operation. In cases of extremely low concentrations, where chemical analysis is of questionable accuracy, a detection level agreed upon by the Ontario Ministry of the Environment and the company concerned will constitute background.

SUBSTANCES OF UNKNOWN TOXICITY

All mine-mill wastes containing materials such as flotation agents, chemical additives, etc., of unknown toxicity should be considered harmful until bioassay tests in keeping with the specifications of the Ontario Ministry of the Environment have shown otherwise.

SULPHATES AND TOTAL DISSOLVED SOLIDS

The policy of the Ontario Ministry of the Environment is to minimize the build-up of sulphates and total dissolved solids in Ontario's receiving waters.

Sulphate and total dissolved solids concentrations in mine-mill effluents should be kept as low as possible using the best available practicable technology.

AMMONIA

Ammonia concentrations in mine-mill effluents should be kept as low as the best available practicable

technology permits. Until the technology for the removal of ammonia from waste streams improves, the use of ammonia and/or ammonium-based compounds by the mining industry should be minimized whenever and wherever possible.

SUSPENDED SOLIDS

A mine-mill effluent should not contain more than 15 mg/litre of suspended solids.

OXYGEN DEMAND

The oxygen demand (chemical or biochemical) of a mine-mill effluent should be limited to a level which will not cause depression at any time of dissolved oxygen concentrations below 6 mg/litre in receiving waters supporting cold water fisheries and 5 mg/litre in receiving waters supporting warm water fisheries.

pH

The pH of a mine-mill effluent must be maintained within the range 5.5 to 10.6 at all times. The pH should never be permitted to drop below 5.5. Sudden changes in pH values should be avoided.

TABLE 2

RECEIVING WATER QUALITY OBJECTIVES

(mg/l)

PARAMETER		HARD WATER	SOFT WATER
Chromium	(dissolved)	0.5 (0.05)*	0.5 (0.05)*
Cobalt	(dissolved)	0.5	0.5
Copper	(dissolved)	0.07	0.03
Iron	(dissolved)	0.3	0.3
Lead	(dissolved)	0.1 (0.05)*	0.05
Nickel	(dissolved)	1.0	0.4
Zinc	(dissolved)	0.2	0.02
Cyanide	(dissolved)	0.01	0.01
Ammonia	(Ammonia Nitrogen as N)	1.5	1.5
Arsenic	(dissolved)	0.05	0.05

(*) Public Surface Water Supply Objective

NOTE #1

The objectives presented in Table 2 are intended to provide adequate protection of Fish and Aquatic life. Other water uses, such as potable water supplies, may necessitate the adoption of more stringent objectives for individual parameters.

It is not the intention that these concentrations be regarded as desirable levels in natural waters since, generally speaking, levels at or close to natural background levels must be considered most desirable. However, when not exceeded over limited areas of receiving waters in proximity to industrial discharges, these objectives should afford adequate protection to the aquatic biota under the

majority of naturally occurring environmental conditions. It should also be noted that these objectives will be reviewed routinely and are subject to change in light of new findings.

NOTE #2

In Table 2, soft water is designated as 100 mg/litre hardness as $CaCO_3$ or less. Hard water is designated as greater than 100 mg/litre hardness as $CaCO_3$. Both definitions refer to natural water hardness. Almost all hardrock mines in the Province of Ontario are located in areas that fall in the "soft water" category.

NOTE #3

Where the natural background concentration in the receiving watercourse exceeds the value given for any parameter in Table 2, the natural background concentration will become the receiving water quality objective.

TABLE 3

GENERAL WATER QUALITY OBJECTIVES

OIL

Oil, petrochemicals or other immiscible substances that will cause visible films or toxic, noxious or nuisance conditions should not be added to water.

COLOUR AND TRANSPARENCY

For effective photosynthetic production of oxygen, it is required that 10 per cent of the incident light reach the bottom of any desired photosynthetic zone in which adequate dissolved oxygen concentrations are to be maintained.

FLOATING MATERIALS

All floating materials, other than those of natural origin, should be excluded from streams and lakes.

TAINTING SUBSTANCES

All materials that will impart odour or taste to fish or edible invertebrates should be excluded from receiving waters at levels that produce tainting.

NUTRIENTS

It is the policy of the Ontario Ministry of the Environment to discourage or minimize the discharge of substances which may promote excess plant growth in a receiving watercourse.

APPENDIX 14

ENVIRONMENTAL DESIGN CONSIDERATIONS

for

ONTARIO MINING OPERATIONS

1976

MINISTRY OF THE ENVIRONMENT

B A C K G R O U N D

The guidelines discussed in this paper are, in general, based on the following detailed Ministry technical reports:

1. The Problem of Acid Mine Drainage in the Province of Ontario (338 pages)
2. The Use, Characteristics and Toxicity of Mine-Mill Reagents in the Province of Ontario (244 pages)
3. Mine Waste Control in Ontario (241 pages)

NOTE:

The guidelines discussed in this paper are supplementary to the "Effluent Guidelines and Receiving Water Quality Objectives for the Mining Industry in Ontario." In addition, all emissions to the ambient air shall comply with the Environmental Protection Act and Regulation 15 of the Revised Regulations of Ontario - 1970.

ENVIRONMENTAL DESIGN CONSIDERATIONS FOR ONTARIO MINING OPERATIONS

This paper is intended to give guidance to those involved in the complete sequence of events surrounding a mining operation. The four titled areas of discussion have been devised to ensure that the proponent creates as little environmental degradation as possible during the life of the mine as well as after the operation has been abandoned. The points covered within the Exploration, Mine-Mill Development, Operation and Abandonment phases would not in themselves constitute an environmental assessment procedure. They are too site-specific in their context. An environmental assessment would come at a much earlier stage of development when a much broader range of topics and alternatives would be investigated and the option of not proceeding with the development was still available. However, an adherence to these environmental design parameters and construction procedures will help to make mining activities more compatible with the natural environment.

PART A: EXPLORATION

Exploration activities may be grouped under line cutting, the construction of temporary access roads, the location and construction of work camps, trenching etc., and diamond drilling.

A-1: Surface geophysical work generally necessitates the cutting of lines through the bush etc., in a grid pattern. Since these lines are generally of minimum width, only minor environmental problems should be encountered. Line cuts should be kept to minimum practical lengths and widths.

A-2: Temporary access roads should be constructed in a manner that minimizes the disturbances of local drainage patterns. In order to prevent unnecessary soil erosion and in order to maintain the natural appearance of the locale, bulldozing of standing timber should be kept to a practical minimum.

A-3: The use of pesticides, herbicides or defoliants to control biting insects or to remove vegetation should be avoided when possible. Questions concerning the use of these chemicals etc. should be referred to the Pesticides Control Section of the Ministry of the Environment.

A-4: Temporary work camps should be equipped with adequate facilities for the disposal of sanitary wastes. Camp garbage should be disposed of in a suitable manner. Camp garbage should not gain access to a watercourse and should not contribute to litter. When the camp is to be abandoned, all temporary buildings and debris should be removed, burned or buried as may be appropriate.

A-5: Exploration trenches and pits etc., should be backfilled when no further examination of exposed rock is required. Backfilled areas should be compacted and seeded in order to prevent erosion.

A-6: Diamond drilling operations are such that small quantities of oil and other lubricants etc., can be released to the environment. Facilities to trap and hold such waste substances should be provided when necessary. Subsequent disposal (burial etc.) of all waste substances should be provided for. Drill-site debris should be cleaned up when the drill site is abandoned.

PART B: MINE-MILL DEVELOPMENT

Mine-mill development activities may be grouped under:

- dewatering of all mineral workings for the purposes of mineral re-evaluation etc.
- the diversion of watercourses to permit mining etc.
- the location of fresh water supplies for use in mineral processing etc.
- the stripping and disposal of open pit overburden
- the location of sites for the proper disposal of waste rock and for the storage of ore and low-grade material
- the location of sites for and the construction of mine-mill buildings and all associated facilities
- the location of the sites for and the construction of adequate tailings disposal areas
- the selection of appropriate waste treatment methods for all wastes and the construction of all required facilities

B-1: A mine operator should determine the natural background concentrations of all known or suspected contaminants of air, land and water for each new mining property. If possible, this information should be obtained before actual physical development of the property commences. Typical metals and/or substances of concern are noted in "Effluent Guidelines and Receiving Water Quality Objectives for the Mining Industry in Ontario."

B-2: A mine operator should obtain a detailed chemical analysis for water found in abandoned mine workings before the workings (shafts, pits, large trenches etc.) are dewatered.

B-3: If underground mineral workings, pits, etc., are to be dewatered for any purpose, the resultant water must be acceptable for discharge to a natural watercourse. If the water that is to be pumped etc. from the workings is impaired in any sense, then physical and/or chemical treatment of the water must take place before the water is discharged. Any liquid wastes generated during the periods of exploration and/or development must be likewise treated before discharge to a natural watercourse.

B-4: Lakes, ponds, rivers, streams and, in general, natural watercourses should not be dammed, diverted from their natural courses or pumped dry in order to permit or to facilitate mining operations unless approval for such a project has been obtained from appropriate government agencies including:

(i) The Ontario Ministry of the Environment

(ii) The Ontario Ministry of Natural Resources

B-5: If water in excess of 10,000 imperial gallons per day is to be taken for mine-mill etc. purposes, approval must be obtained from the Ontario Ministry of the Environment.

B-6: Ore that is to be developed by open pit methods is usually covered by a relatively thin layer (a few feet or a few tens of feet) of unconsolidated or consolidated material. If this material is solid rock it may be directed to the waste rock dump or, if non-mineralized or only sparsely mineralized, it may be used for road building etc. Unconsolidated material such as muskeg, clay, sand and/or gravel, although frequently treated as useless waste, should always be directed to its own dump site where temporary or permanent storage of the material can take place in a manner such that erosion is minimized. If, upon abandonment, no real use can be found for this material, it can be revegetated with a minimum effort. However, in nearly all cases, material of this nature can be used (for revegetation purposes) to cover badly despoiled areas, to cover large relatively flat barren areas, to bury garbage, to cover concrete pads after the (mill etc.) buildings have been removed, to cover parking lots, to cover unused roads and to revegetate benches in pits etc. The uses this type of material can be put to is almost unlimited.

B-7: With stripping ratios (waste/ore) of up to 5:1, the disposal of waste rock at some mining sites is a major problem. Each waste dump may contain hundreds of thousands or millions of tons of barren or sparsely mineralized waste rock.

a) Waste rock dumps should always be sited on a secure base (solid rock if possible).

b) Waste rock dumps should be constructed in a location and manner that minimizes the leaching effects of natural precipitation.

c) Waste rock dumps should always be sited as far away as possible from natural watercourses etc. Where this is impossible, uncontaminated freshwater streams etc. should be diverted around or away from waste rock storage areas.

d) Waste rock containing abnormal concentrations of iron sulphides or other undesirable reactive materials should be disposed of in a separate rigidly controlled storage area. This type of material should not be used for general purposes such as the construction of tailings dams or roads etc.

e) Waste rock storage piles should not be permitted to become a major feature of the local landscape. In other words, the height of a waste rock dump should not be in excess of the local mature tree-top level where this is practical. Where this is not practical, common sense should be used.

This type of height restriction should also be placed on tailings dams.

B-8: All petrochemicals, bulk chemicals and miscellaneous chemicals required at a mine-mill operation should be stored in well defined areas that are enclosed by adequate curbing in order to contain accidental spills. All storage tanks should be located on concrete or rock pads. Each storage tank should be surrounded by a continuous curb of sufficient height to contain 110 per cent of the capacity of the tank. Where a curb contains more than one tank, the emergency storage capacity required is equal to the capacity of the largest tank plus 10 per cent of the aggregate capacity of all the other tanks or 110 per cent of the largest tank, whichever is greater.

B-9: Mine-mill reagents vary in toxicity. Some are highly toxic while others, considering the circumstances of use, are relatively non-toxic. Some are persistent and hence will escape from a tailings area to downstream waters. Others are unstable and will break down in a tailings area.

When reagents are being chosen for use in a mining operation, the least toxic compounds available should be chosen wherever possible. Included in the definition of "least" toxic compounds are those toxic compounds that break down rapidly (into innocuous substances) which can be removed easily from a waste stream using accepted waste treatment technology.

B-10: The use of mine-mill reagents that are persistent (that is, reagents that do not break down easily in a natural environment) should be avoided if possible.

B-11: The use of mine-mill reagents having known or suspected nutrient properties should be avoided if possible.

B-12: When choosing a reagent for use in a mine-mill circuit or process, the total effect of that particular reagent on the receiving watercourse should always be considered. Reagent characteristics to investigate, for instance, would generally include chemical oxygen demand, bio-chemical oxygen demand, biodegradability, effects on local aquatic life (plant and animal) and effects on the total dissolved solids concentration and hardness of the receiving stream.

B-13: The use of mine-mill reagents that consist of or contain water-soluble salts of metals that are known or suspected to exhibit undesirable environmental effects should be avoided if possible.

B-14: It is generally desirable to locate a tailings area decant as close as possible to the mill. Since waste treatment facilities will normally be located at or near a tailings area decant, a decant facility close to the mill will:

a) permit shorter hydro lines to the treatment site

b) permit shorter access roads to the site and will hence reduce road construction and maintenance costs

c) permit shorter recycle etc. lines from the site to the mill. Subsequent savings will be realized in pumping costs, insulation costs and so forth

B-14: cont'd

d) in some cases permit waste treatment reagent storage tanks, mixing tanks etc., to be located in the mill itself. Under these circumstances, waste treatment reagents could be pumped directly to the treatment area thus eliminating the expense of a heated automatically controlled waste treatment building at the treatment site itself.

In addition to the above, a tailings area decant adjacent to the mill permits close surveillance of the tailings area effluent by the mill staff.

B-15: THE RECYCLE (RE-USE) OF MINE-MILL WASTEWATERS MUST BE PRACTICED TO THE MAXIMUM EXTENT POSSIBLE AT EACH MINE-MILL OPERATION.

B-16: Wastewater recycle is most often complicated by the presence of mineral slimes and/or residual quantities of persistent reagents in the recycle stream. As a result, one or more circuits in the mill may not accept the recycle water. Therefore, wastewater recycle should generally not be attempted from the primary (tailings) pond itself. The tailings area decant should be directed to a secondary area which acts as the recycle intake point.

B-17: WHENEVER POSSIBLE, LAND DISPOSAL OF TAILINGS SHOULD BE PRACTICED.

WHENEVER POSSIBLE, UNDERWATER DISPOSAL OF TAILINGS SHOULD BE AVOIDED.

B-18: All standing timber and/or brush should be removed from a tailings area before the area is placed into operation.

B-19: Tailings area decant ponds must be sufficiently deep to provide a quiescent settling zone for the tailings particles. If the pond is too shallow, wind and wave action may prevent settling.

B-20: The water in a decant pond should not be allowed to come into direct contact with a tailings dam. Where water must directly contact a dam, the water depth should be minimal and protection against wave action should be provided.

B-21: Emergency wastewater capacity in a tailings area should be provided. This can be done by ensuring that the overflow structure on the decant tower etc., is adjustable.

B-22: Decant tunnels (within a tailings mass) should be kept as short as possible. Consideration should always be given to alternate decant facilities should the main structure fail.

B-23: The main functions of a tailings area are solids: liquid separation and solids containment. As a general rule, chemical and/or biological treatment of the liquid phase of a tailings slurry should not be attempted within the confines of the tailings area itself.

B-24: When possible, tailings dams should be constructed to their final heights before milling commences. When practicable, all downstream slopes of tailings dams should be revegetated as quickly as possible.

B-25: The use of classified mill tailings for the construction of perimeter (external) tailings dams should be avoided if possible.

B-26: Whenever and wherever possible, tailings dams should be impermeable. Impermeable dams do not give rise to contaminated seepage flows.

B-27: All contaminated seepage flows from the bases of permeable dams should be collected for treatment.

B-28: All liquid waste flows originating at a mining operation should be monitored (chemical characteristics, volume etc.) by the company involved on a routine basis.

B-29: In general, seepage from the bases of permeable dams should not be returned directly to a tailings area.

B-30: The design of a tailings area, especially a tailings area that is to be incorporated into a wastewater recycle scheme, should not be finalized until the following factors have been taken into consideration:

(i) Many important mine-mill reagents are organic compounds. In a favourable environment, most of these compounds will exhibit a degree of biodegradability.

(ii) Residual concentrations of mine-mill reagents have been identified in the effluents from mining operations that work sulphide ores. For instance, xanthate residuals of 0.2 to 1.2 mg/litre and dithiophosphate residuals in the range of 0.3 to 2.7 mg/litre have been noted.

B-30: cont'd

(iii) In general, the constituents of frothers are volatile substances. Accordingly, a substantial quantity of the frothers added in flotation operations is volatilized so that re-use of flotation tailings waters does not necessarily reduce proportionately the requirement for frothers.

Unwanted quantities of a particular frother appearing in a recycle stream (from a tailings area etc.) can probably be reduced or eliminated by:

a) increasing the retention time of the frother - containing wastes before recycle to the mill; or

b) applying a degree of mechnical aeration etc. to the frother containing waste; or

c) selecting another frother with superior breakdown properties for use in the mill.

B-31: Tailings lines should be duplicated whenever and wherever possible. The function of the second line is to provide an alternate tailings discharge route should the first line break, plug, freeze or require repairs.

B-32: In general, tailings lines should be as short as possible. The longer a tailings line is, the greater the chances of failure are. A short line is easier to twin.

B-33: Emergency spill areas should always be provided near the tailings line in case of power failure etc. in the mill etc. Tailings lines should be self-draining to the tailings area and/or to the emergency spill area. In some cases (i.e., a long line over rough country) several spill areas may have to be provided.

B-34: A mine waste treatment plant should be equipped with an emergency power source. If this is not possible, retention facilities should be constructed to hold untreated waste until treatment can be provided.

B-35: If possible, all liquid effluents from a specific property should be directed to a common point (for treatment if necessary) before discharge to a natural watercourse. Treated wastes should not be directed to more than one watershed.

B-36: If possible, special wastes such as wash water from the reagent storage and mixing area in a flotation mill should be directed to an engineered pond (lagoon) where the concentrated contaminated waste could be held for a period of time in order to permit the decomposition of substances that will break down in a natural environment. The overflow from such a pond could be directed to the tailings area. The pond would act to prevent surges of reagent-rich or oil-rich wastes from entering the tailings area and, as such, would help to protect the mill circuit from upsets due to suddenly impaired recycle water.

B-37: Natural processes (atmospheric oxidation, bacterial activity etc.) should be used to accomplish waste treatment whenever and wherever possible. Mechanical pumping facilities should not be used if gravity flows are possible and practical.

B-38: In general, sanitary wastes should not be directed to a tailings area without appropriate treatment.

PART C: OPERATION

Guidelines in this section are intended to cover the routine day-to-day activities of an active mine-mill complex.

C-1: A minimum of three feet of freeboard should be maintained in all tailings areas.

C-2: All liquid effluent flows should be subject to routine monitoring.

C-3: All engineered facilities (tailings dams, decant structures etc.) should be inspected on a routine basis for stability etc.

C-4: A tailings slurry should be discharged into a tailings area at a point that is remote from the tailings area decant overflow.

C-5: Domestic garbage and garbage generated by the mine-mill operation itself should not be dumped into watercourses. Instead, approved disposal practices should be followed.

C-6: Revegetation or stabilization of tailings should take place as tailings accumulate during the active life of a mine-mill complex.

PART D: ABANDONMENT

Guidelines in this section are intended to apply to mine-mill properties when they are to be abandoned.

D-1: All mine-mill structures should be completely dismantled. The resulting material should be removed from the property or should be disposed of in a suitable manner.

D-2: All mine-mill machinery etc., should be removed from the property or, if this is not practical, should be collected and disposed of on the property in a suitable manner. All such waste, for instance, could be collected in a common area and covered with soil (spoil from the pit area etc.). The resulting mound could be easily revegetated. Perhaps this type of waste could be taken to a gravel pit etc. on the property and, at a suitable time, could be buried. Any small open pits on the property could serve as burial areas.

The possibility of groundwater contamination should always be kept in mind when waste materials are to be buried.

D-3: Whenever and wherever possible and practicable, waste rock or, in general, spoil piles should be graded to below mature tree level. Where this is impossible, waste piles should be kept as low as possible.

D-4: Where garbage from a townsite etc., has been permitted to accumulate, the garbage should covered with earth and revegetated before the property is abandoned.

D-5: Tailings areas, tailings dams, waste rock dumps, and mill sites etc., should be revegetated in an approved manner.

APPENDIX 15

DRAFT ENVIRONMENTAL ASSESSMENT GUIDELINES FOR A POTENTIAL GENERATION STATION IN THE NORTH CHANNEL AREA

MINISTRY OF THE ENVIRONMENT
March 27, 1975

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DRAFT ENVIRONMENTAL ASSESSMENT GUIDELINES FOR A POTENTIAL GENERATION STATION IN THE NORTH CHANNEL AREA

March 27, 1975

INTRODUCTION

The guidelines are basically intended to demonstrate to the proponent the content of an Environmental Assessment Document, but in addition they also describe the general processes to be followed in outlining how decisions are made and conclusions are reached.

The guidelines have been laid out under the assumption that the selection philosophy expressed by Ontario Hydro is acceptable. That is, that the Province be divided into study areas and that these study areas be evaluated through successive levels of inventory and analysis to determine from an environmental point of view if there are any potential sites for generation facilities. A flow chart respecting this assumption is shown in Figure 1. It will be noted that the flow chart includes the inherent steps of evaluation at each level.

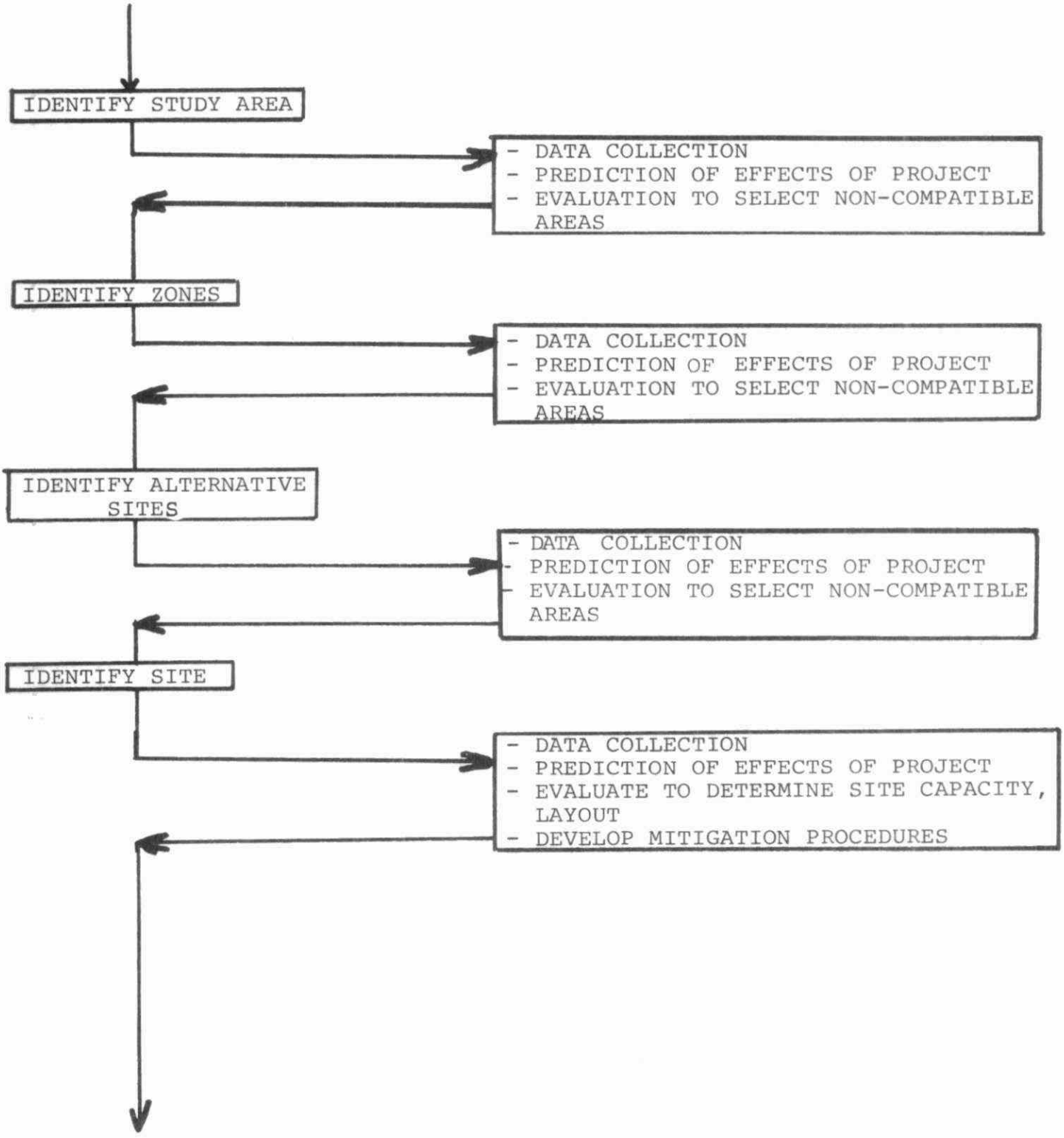
The inventory gathered should be cognizant of the potential effects of the proposed facility AS IT IS ENVISAGED AT THAT STAGE (Zones, Alternative Sites, Site). The inventory then passes through an analysis and Prediction of Effects stage. The results are then evaluated and these evaluations are then carried into the decision making process so that alternatives may be rated both with respect to facilities and sites. The 'non-compatible' areas are then rejected, leaving smaller areas for further studies in greater detail.

It is also our assumption that the aforementioned study areas are chosen to include major conceptual alternative ways of solving an identified need and yet are flexible enough to accommodate both changes arising from continuing studies and, an understanding of the Provincial system as a whole (especially effects on neighbouring study areas).

In conjunction with this evaluation process is the consideration of not only the generation facilities and heavy water plants themselves, but also the related transmission needs. With respect to generation and transmission, it is understood that the study areas are first evaluated to produce "Zones" (by the process described within) and "Bands" (described in Guidelines for Transmission Lines). These are then evaluated to determine potential sites and corridors and ultimately a preferred site and right-of-way. Throughout the process cross reference and integration between the generation and transmission studies is required.

Figure 1.

GENERAL FLOW CHART - STUDY PROCEDURE *


IDENTIFY STUDY AREA
- DATA COLLECTION
- PREDICTION OF EFFECTS OF PROJECT
- EVALUATION TO SELECT NON-COMPATIBLE AREAS
IDENTIFY ZONES
- DATA COLLECTION
- PREDICTION OF EFFECTS OF PROJECT
- EVALUATION TO SELECT NON-COMPATIBLE AREAS
IDENTIFY ALTERNATIVE SITES
- DATA COLLECTION
- PREDICTION OF EFFECTS OF PROJECT
- EVALUATION TO SELECT NON-COMPATIBLE AREAS
IDENTIFY SITE
- DATA COLLECTION
- PREDICTION OF EFFECTS OF PROJECT
- EVALUATE TO DETERMINE SITE CAPACITY, LAYOUT
- DEVELOP MITIGATION PROCEDURES

The procedure outlined is only part of the overall assessment process. It shows the steps required to locate a potential site within a study area and is intended to stress successive iteration at increasing levels of detail.

Consideration must be given to the 'no-go' alternative allowing for the proponent to explain the consequences of not implementing the proposed undertaking. This will also provide a bench mark as to whether the proposed undertaking will improve or impair the total environment. In this context the definition of environment is considered to include the following:

(i) air, land, or water

(ii) plant and animal life, including man,

(iii) the social, economic and cultural conditions that influence the life of man or a community,

(iv) any building, structure, machine or other device or thing made by man,

(v) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from the activities of man, or

(vi) any part or combination of the foregoing and the inter-relationships between any two or more of them,

In addition, it is recognized that the decisions made by the proponent may be constrained by other decisions taken outside of the assessment process; and, if this is the case, identification of the constraining decision(s) will assist the proponent in evaluating alterantives.

Meaningful public participation is important to the environmental assessment process in general, and to the search for a site suitable for generation facilities in particular. The inclusion of the results of the participation will assist in establishing its role in the decision making process.

THESE GUIDELINES ONLY COVER THE ENVIRONMENTAL PROCESS UP TO AND INCLUDING THE CHOICE BY THE PROPONENT OF A FINAL SITE. It should be recognized that the environmental assessment process includes a continuing monitoring program to determine whether the decisions made in the planning and the pre-construction process were correct and whether or not the methodologies used produce realistic results.

Inherent in this environmental assessment process are the following:

- the clear identification of all decisions resulting from the evaluations carried out and effecting the ultimate outcome, so that they may be recalled without problem during the review procedure by Government agencies and the public.

- the recognition that THE FOLLOWING GUIDELINES ARE MEANT TO BE ILLUSTRATIVE RATHER THAN INCLUSIVE. Additional factors, which have not been specifically covered herein, relating to the facilities or the inventory, are likely to emerge as the study proceeds. The proponent has the responsibility to recognize these factors and include them in his evaluation.

- that there be continuing communication between the proponent and the reviewing agencies throughout the process so that the agencies may be informed of progress, problems, methodologies and may input additional concerns if necessary.

- that the details and/or study design of all studies will be mutually agreed upon between Hydro and the Ministry before they are begun.

- recognition that studies are to be prepared and conducted so that the information obtained provides an accurate, qualitative and quantitative description of the phenomena under investigation.

- that in applicable areas, such as Water Resources, specific studies should be undertaken to evaluate the variability of data obtained and precision to which a predicted or measured effect is estimated or determined. Analytical and other methods used for measurements and analysis should be those known to give a high degree of reliability under the condition of study.

- an agreed timing for the submission and review of the data with reasonable lead time for effective and meaningful review by Government Ministries and/or agencies consistant with the circumstances of the individual project.

- that interim documents or information will be transmitted at the end of the alternative site stage as this is one of the most crucial points in the decision making process. THE ONUS IS ON THE PROPONENT TO ADVISE PRIOR TO MAKING ANY DECISIONS WHICH THE PROPONENT REGARDS AS IRREVERSIBLE. The timing of additional interim, and final submissions should be discussed and agreed to by the Ministry.

- the consideration of the proposed Ultimate Capacity of the sites and the effects if this assumption is realized.

- that data used to compare two or more sites or Zones be of the same degree of detail for each.

- that the environmental assessment document be summarized by the proponent in layman's language.

ENVIRONMENTAL ASSESSMENT

I RATIONALE

Background

As noted, it is possible that there may be decisions made external to the environmental assessment process which constrain the alternative conceptual plans studied. These conceptual plans and their evaluations are considered to be possibly the most important part of any environmental assessment and, thus, any decision affecting them or causing their elimination must be firmly based and well identified. Such decisions may arise out of the Long Range Plan Hearings or by prior policies set by the Provincial Government.

Purpose and Need

The document will have a statement of purpose expressing both the specific benefits or services which the undertaking proposes to provide and the client group(s) to which these benefits are to be delivered. The statement of purpose should not identify the means by which the end is to be achieved, rather, this should arise in the next stage from the discussion and evaluation of alternatives available to solve the need.

This statement should be followed by a discussion of the specific need for power and the evaluation of solutions, making reference to the factors to be considered at the conceptual stage.

It is recognized that future Ontario Energy Board Hearings and the newly established Porter Commission (Long Range Hearings) will result in the establishment of criteria which may affect the need and locational aspects (i.e. at the level of the study area) and possibly other aspects of generation facilities. Accommodation for such decisions is made at this point in the assessment. Conversely, it could also prove advantageous that the findings of the studies on the North Channel be available to the Long Range Plan Hearings.

Alternative Conceptual Plans

Having identified the need, the proponent must consider methods (generally called Alternative Conceptual Plans) of fulfilling this need, including 'no-go'. Implicit in this consideration is the inclusion of the parameters relating to the total environment.

Discussion would include reference to the following:

- conceptual ways of fulfilling need
- discussions of particular alternatives, including the null situation;
  - give reasons, decisions for elimination of any alternative
- study area
- need for G.S.
- objectives of G.S. locating in study area
- ultimate target capacity

II PROJECT DESCRIPTION

In the course of the process the proponent should indicate (at the various stages) the details of the project available as the site study proceeds to Zones, to alternate sites and to best potential site, so that the inventory gathered and its evaluation may be readily understood. Such details would be included within the site selection part of the report (Part III). However, the ultimate project description should be presented as Part II to show the choice best suited to the chosen site.

The following general topics cover the most pertinent aspects of the description. These are further described in Appendix A.

1. General Description
2. Fuel
3. Construction Methods
4. Operating Procedures and Maintenance.

III SITE SELECTION

Preamble

The selection process for a 'best' site from the total environmental point of view encompasses a series of iterative steps commencing with the identification of a study area followed by the division of that area into successively smaller units having potential for a generation station site. This division has been outlined in the following four stages: Identify Zones; Identify Alternative Sites; Identify a Site and finally the Site Evaluation. Within each stage the process should cover three distinct, but interconnected levels of study. Figure 1 details the procedure

First, the Inventory Factors should be relevant to the intended project as described at that stage. Second, the Predictions of Effects should result from reference of the Inventory to the project description as determined at that stage. Third, these effects must be Evaluated both individually and comparitively to determine whether continuing consideration is desirable or if that particular Zone or site should be rejected from further investigation. Throughout the proponent must consider the cross boundary effects, in relation to the study area as a whole and the Zones or sites in particular (boundaries should not be too rigidly defined). That is, the choice of any Zone or site will not mean that effects or impacts of a generation facility be restricted within those boundaries. The effects beyond the boundaries could be important and warrant attention.

It is recognized that a similar procedure will be underway to locate areas where it may be possible to locate transmission facilities. It will be necessary to integrate decisions made with respect to Zones and Bands.

1. Identify Zones

This should represent 'first cut' gathering of inventory and, after prediction of effects and evaluation, should result in a delineation of "Zones", or broad areas, where it may be possible to locate generation stations.

This is in line with Ontario Hydro's assumptions that the factors be broken into two possible categories:

(i) definintion of legally oriented constraint boundaries around major Zones including, if necessary, both of:
- legal
- quasi-legal (e.g. Indian Reserves)

(ii) division of these Zones into sub-Zones through a process of analysis that refers to factors and information within the following definition of environment:

. environment where this includes the meaning and intent as described on Page 3.

2. Identify Alternate Sites

Decisions now orient around the selection of sites out of Zones and/or sub-Zones. The alternatives require evaluation in sufficient detail such that the best potential choices for the location of the facility result. This Section closely parallels Section 3, following, and reference should be made therein for further details on the factors to be considered. Above all, the text should describe concisely yet precisely the reasoning leading to the elimination of any alternatives at this stage of the iterative process.

3. Identify Site

Having chosen a series of alternate sites the proponent must evaluate those in sufficient detail to decide upon the best potential site. This stage is considered to be of extreme importance as the evaluation will likely determine if a generation facility can be located and where.

It is again stressed, that the inventory to be gathered, be comprehensive enough to relate to the project description and to the subsequent decision making process. It is the responsibility of the proponent to include all details which the in-house and field work shows to be of importance. Factors could be included under the headings below, which are chosen for convenience,* and are further expanded in Appendix B. It is suggested that reference to Appendix C could assist the proponent on further details of factors (an expansion of Appendix B).

- Physical Terrain
- Air Resources
- Water Resources
- Biology (terrestrial)
- Land Use
- Social & Community (including Aesthetics)
- Noise

Having collected the inventory the decisions will result from the Effect Prediction and Evaluation as previously described.

* The choice and order of headings and factors (as listed in the Appendices) indicate the broad range of information to be considered. It does not represent the order of importance or the judgement that one is more important than another.

4. Site Evaluation

This final stage, in the choice of site, commences with the collection of site data, followed by the prediction of effects on this site and the surrounding area. The evaluation of these predictions to determine acceptability of the project at that location and finally, the preparation of mitigation procedures to minimize the identified adverse effects, form the basis of design criteria for plant facilities. It is recognized that a great deal of information collected at the previous stage will be applicable here also. Notwithstanding, it is indicated that further knowledge of the site characteristics, which can only be gained through more detailed study would prove invaluable to site design. For this reason, Appendix C elaborates further on the factors of Appendix B to indicate the need for greater depth of study.

The factors must be detailed enough to allow for the evaluation of all effects relative to the project intended. The following general topics, which are detailed in Appendix C, are suggested:

1. Physical Terrain
   - (i) Geological Characteristics
   - (ii) Soils & Stability
   - (iii) Seismic Action

2. Air Resources
   - (i) Quality
   - (ii) Dispersion and Climatology
   - (iii) Fogging and Icing

3. Water Resources
   - (i) General
   - (ii) Physical
   - (iii) Chemical
   - (iv) Biological

4. Biology (terrestrial)
   - (i) Terrestrial Ecosystems
   - (ii) Sensitive Species
   - (iii) Breeding Habitats (terrestrial)
   - (iv) Rare and Endangered Species

5. Land Use
   - (i) Land Use Planning
   - (ii) Agricultural
   - (iii) Non-agricultural

6. Social & Community

(i) Health
(ii) Communities
(iii) Historical Areas
(iv) Archeological Sites
(v) Aesthetics

7. Noise

As noted in the previous stage, the factors are used for the Prediction of Effects and the resultant Evaluation of these predictions will form the basis of design criteria. As an added assistance, Appendix C. Part II, has been arranged to aid in the effect prediction process.

IV MITIGATION

This should relate the Inventory and Effect Prediction of the preferred site to the project description. The purpose being, designing to minimize all detrimental effects during construction and operation both on-site and off-site. This will mean some tradeoffs by the proponents and should consider both on-site and off-site impacts. The following list does not preclude the addition of subsequent details which the foregoing studies have recognized:

ON-SITE

Construction

- Site Preparation
- Construction Grading
- Construction Camp
- Storage of Materials
- Site Boundary Effects
- Education of Personnel
- Restoration

Operation

- Waste Emissions
- Fuel Storage
- Fuel Transportation
- Maintenance
- Contingency Planning
- Noise
- Education
- Protection of Employees

Operational Shut-Down Procedures

General procedures should be itemized respecting a temporary shut down (and start up) of the facility. If emissions (air, water, noise, etc.) exceed criteria and standards these should be itemized along with any suggested mitigation procedures.

The proponent should consider the effect/mitigation of ultimate site shut down. Particular reference is required to long term implications of nuclear reactors which may remain 'hot' for many years. Procedures for the protection of the public and the environment should be detailed.

OFF-SITE

Construction

- Transport
- Vehicular Loads
- Noise
- Dust
- Waste Removal
- Source of Bulk Aggregate

Work Force

- Community Impacts
- Changes in Servicing (sewage, hospitals, police, etc.)

Operation

- Upgrading of Facilities
- Housing
- Servicing

APPENDIX "A"

PROJECT DESCRIPTION

The following is a listing of factors relevant to the project description component of the Environmental Assessment process. The proponent should include any additional information or data which comes to the proponent's attention as being important in the decision making process.

1. GENERAL

- type(s) of G.S. (why chosen?)
- initial size, phasing, ultimately desired size
- generation unit size
- intended date for 'in service' (first unit)
- economics
- requirements for egress
- cooling system
  - intake method, structures, screenhouses - characteristics
  - discharge method, structures - characteristics
  - continuous quantity of water (or make up required)
  - alternatives considered, other uses of heated effluent
  - flexibility for positioning
  - other
- additional servicing facilities
  - railways
  - docks
  - roads
  - other
- people
  - labour force (numbers) - consider relationship to phasing of construction
  - operating force (numbers)
  - qualifications (i.e. breakdown numbers into skilled, unskilled, temporary, permanent, etc.)
  - number of new residences required
  - need for new facilities such as:
    - servicing and utilities
    - community services
    - other

2. FUEL

- type
- sources
- handling procedures
- temperature limitations
- safety measures
- possible hazards
- storage
- likely wastes
- handling and storage of spent materials
- contingency plans - for raw spent fuel
- other

3. CONSTRUCTION

- timing
  - for each phase commencing with:
    - site clearing
    - excavation
    - etc.
- living areas (if special camp is to be located on/near site)
- storage area(s)
- phasing - of additions to station capacity
- special equipment
- procedures
  - clearing
  - excavation
  - fill - removal/supply - sources
    - approximate quantities
  - shoreline fill
    - materials
    - sources
    - methods
  - physical construction
  - restoration
- other

4. OPERATING PROCEDURES

- noise - give criteria, monitoring procedures
- complete testing and analysis of chemical and radiological wastes (including condenser biocides boiler blowdown, water treatment wastes, radioactive wastes, etc.)
- listing of any and all other likely contaminants having potential for human health hazards
- treatment proposals and expected levels of discharge related to possible fate in the ecosystem
- peak periods
- emergencies - contingency plans
- temperature (cooling water) controls
- fish control - entrainment, entrapment, disposal of dead fish and algae
- reporting mechanisms (to whom, and when?)
  - day to day
  - emergencies
  - emissions
- monitoring
  - inside and outside of plant
  - off plant operations, emissions
- radiation
  - control
  - monitoring
  - contingency procedures
- other

APPENDIX "B"

SITE IDENTIFICATION FACTORS

The following is a listing of factors relevant to the Identification of a site by the evaluation of Alternative Sites. Reference to Appendix "C" could assist the proponent as to the further elaboration of the factors listed herein. It is the proponents responsibility to add any additional information relevant to the decision making process.

It is possible that this Appendix may also assist in the Identification of Alternative Sites from Zones (the step prior to the one above) although it is recognized that the same level of detail may or may not be necessary.

PHYSICAL TERRAIN

- topography
- soil types
- agricultural classifications
- soil stability
- erodibility
- subsidence
  - related to underground mines, caverns, watercourses, etc.
- geology
- bedrock location
- seismic data
- unique features
- other

AIR RESOURCES

- meteorological data (wind speeds, direction, stability data, temperatures, humidity)
- air quality and standards in area, and within potential zone of impact
- potential points of impingement (especially cities or towns should such areas contain sources of sulphur dioxide emitting more than 2,000 lb/hr; a monitoring station should be set up to determine existing levels)
- phytotoxicity parameters

WATER RESOURCES

The biological studies should establish baseline information on all trophic levels of the aquatic ecosystem and assess, with relation to the scientific literature and other information available (supplemented by special studies which may be required), the possible effects of thermal generation at that site. Consideration should also be given to the possibility of far-field or lake-wide effects which may be initiated by local effects.

General

. water use policies
. water uses for recreation, sport fisheries, commercial fishing
. other

Physical

. meteorological parameters affecting thermal plume dispersal and cooling
. lake bottom topography
. sediment types, locations
. thermal regime (including upwelling phenomena)
. currents
. littoral drift, erosion and/or sedimentation
. shoreline ice
. groundwater - location; recharge-discharge area
. impoundments
. set-up and seiches
. detailed assessment, with reference to mathematical and physical models and information, of the possible extent, depth, direction, and effects of the various possible thermal plumes which could be produced from a plant at the site taking into consideration all information gathered on the physical description.

Chemical

. conventional parameters for water quality survey (solids, nutrients, trace)
. levels of radioactivity, pathways of concentration of probable effluents.

Biological

. aquatic macrophytes
. microbiology (bacteriology)
. phytoplankton
. periphyton
. zooplankton
. the psammo littoral community
. benthic macroinvertebrates
. planktonic macroinvertebrates
. fish
. amphibians and reptiles
. waterfowl
. water dwelling mammals

These topics should emphasize:

. species biology
. seasonal population levels
. movements (e.g. spawning runs)
. reproduction
. food web relationships
. substrate relationships
. their temperature requirements at various times of the year
. key factors controlling population levels

These studies should be supplemented by special studies on particular topics such as:

1. Potential impingement of screenable fish at cooling water intakes.

2. Potential entrainment with the passage of phytoplankton, zooplankton, fish and fish eggs, through the cooling waters system of the plant. The effect of various condenser ΔT's should be considered.

3. Entrainment of organisms in any tempering water or in the sides of the thermal plume.

BIOLOGY (terrestrial)

. terrestrial ecosystems (floral, faunal and physical components)
. sensitive species
. breeding habitats (especially for sensitive species)
. population dynamics
. species migration
. rare and/or endangered species (presence, breeding potential)
. uniqueness of area (including scale of area considered)
. tropho-dynamics
. other

LAND USE

. land use planning
. agricultural (crops, products, sensitivities, etc.)
. non-agricultural
  - rural
  - urban
  - recreational
  - mineral resources
  - forestry resources

SOCIAL & COMMUNITY

. community inventory such as:
  - population distribution
  - labour availability
  - educational
  - social
. agricultural community
  - labour dependancy
  - systems operation
. servicing (i.e. G.S. and community)
. land use (other than above)
. local planning (e.g. Official Plans)
. zoning
. transportation
. egress - existing land uses
. historical areas
. archaeology
. aesthetics
. health
  - existing criteria for public employees
  - maximum radiation doses, predictions

APPENDIX "C"

SITE EVALUATION

The following is a listing of factors relevant to the evaluation of the chosen site for design and mitigation purposes. The level of detail is expanded somewhat from the previous Appendix as an indication that further in-depth on-site studies are necessary before detailed site layout.

PART I - INVENTORY

1. PHYSICAL TERRAIN

(i) Geological Characteristics

- . topography
- . stratigraphy, geomorphology
- . weathering, geochemistry
- . unique or significant fossils
- . precious and semi-precious rock areas
- . unique features
- . other

(ii) Soils and Stability

- . slopes
  - stability
  - structural loads
  - rock fall
- . soil types
- . soil stability (related to soil types & particular terrain features)
- . depth of overburden
- . erodibility
- . disposal of excess soil material
- . permeability
- . subsidence
- . other

(iii) Seismic Action

- . local seismic activity
- . distant seismic activity (i.e. identify that nearest to site)
- . public safety aspects
- . other

2. AIR RESOURCES

(i) Quality

- . existing air quality on-site) Background contaminants
- . existing air quality off-site)
- . Phytotoxicology data

(ii) Dispersion Climatology

. wind speeds
. mixing heights
. frequency of inversions
. mixing conditions
. limitations of topography (e.g. Valley and Canyon Sites)
. wind directions and frequency
. atmospheric stability
. natural heat flux
. number and locations of heat sources (having potential influence around site)
. other

(iii) Fogging and Icing

. magnitude of possible natural fog concentrations
. areas prone to fog
. type
. major transportation routes
. possible impingement from facility (note especially cooling towers)
. other

3. WATER RESOURCES

(i) General

The examples of policy considerations listed below should be considered in light of the site being studied. Those having a potential role in the decision making process should be noted with pertinent detail. Any others coming to the attention of the proponent and not listed should also be included.

. riparian rights
. shoreline rights
. water use priorities
. policy on water taking
. other uses made of water body (e.g. agriculture, recreation, etc.)
. International Treaties
. long range water management plans
. soil conservation measures - related to water
. flood management plans
. Ontario Hydro Policies
. ground water
. combined effects
. other

(ii) Physical

The inventory gathered in Appendix "B" may require expansion to more accurately reflect the site characteristics and to provide further information for the development of mitigation procedures.

(iii) Chemical

See above (ii)

(iv) Biology

See above (ii)

4. BIOLOGY (Terrestrial)

(i) Terrestrial Ecosystems

- floral, faunal components
- communities, interrelationships
- species diversity
- ecosystem trophic structure
- other

(ii) Sensitive Species

- floral and faunal
- interrelationships
- scale of area

(iii) Breeding Habitats (Terrestrial)

- waterfowl habitat, staging areas
- identification of breeding habitats within the area of potential influence (e.g. deer yards. Note especially sensitive species)
- identities of important species and reproductive habitat requirements
- migration
- population dynamics
- carrying capacity
- communities
- other

(iv) Rare & Endangered Species

- identification of rare and endangered species (plant or animal) as defined by any public agency
- note habitat, breeding area, range, feeding area & food
- ability to adapt

5. LAND USE

(i) Land Use Planning

. Provincial Ministry Plans and Programs
. Local Official Plans and zoning by-laws, regional and special commission plans
. Federal lands and reserves and Federal Treaties
. Rights on lands
. Coastal Zone Plans
. Watershed Plans

(ii) Agricultural

. classes of agricultural land
. give agricultural uses, acreages, trends, etc. such as:
  - crops
  - dairy
  - beef
  - poultry
  - orchard
. special agricultural crops/programs

(iii) Non-Agricultural

. all existing land use within area of potential effect
. mineral resources such as:
  - existing and potential oil and gas pools
  - existing and potential pits and quarries
  - other known mineral deposits
. forest resources such as:
  - seed production stands
  - shelter or other protective belts
  - agreement forests
  - forests managed in conjunction with public agencies
. recreational uses

6. SOCIAL & COMMUNITY

(i) Health

. Federal criteria
. Provincial criteria

(ii) Communities

. population distribution
. labour force
. important industrial areas
. housing availability
. servicing availability - limits
. existing wage structures
. transportation

(iii) Historical Areas

. identification of all historic areas that may be affected by site or transmission lines

(iv) Archaeological Studies

. identification of archaeological sites
. significance of sites

(v) Aesthetics

7. NOISE

. allowable criteria
. local by-laws
. potential from plant
. upset conditions

PART II - EVALUATION

1. PHYSICAL TERRAIN

(i) Geological Characteristics

. potential effects of faulting
. effect of accelerated weathering
. effect on unique features, notable deposits (e.g. fossils)

(ii) Soils & Stability

. predicted effects of permanent facilities on stability (i.e. steep banks, dust, erosion of shoreline, etc.)
. effects of construction on stability (including above, and dust, sheet erosion, changes to shoreline, etc.
. effect of plant on surrounding agricultural lands and productivity
. potential effects on facility due to subsidence (settling)

(iii) Seismic Action

. effect of historical activity on site to date
. potential for contamination release due to structural damage
. hazard presented to intake and/or discharge

2. AIR RESOURCES

(i) Air Quality

. plant contaminants - toxic effects
. on-site deterioration
. effect on neighbouring persons and/or communities
. potential effects on employees

(ii) Dispersion Climatology

. predicted air dispersions
  - under all possible conditions
. impingement (and frequency)
. inversions
. interaction with other sources
. predicted microclimatic change

(iii) Fogging and Icing

. potential for addition to fog/ice conditions because of facilities
  - must consider worst case
. point of impingement of water vapour from all sources
. effect on adjacent land uses

3. WATER RESOURCES

(i) General

Those noted under "Inventory" (Section III) should be discussed in relation to expectation of potential impact, and the limitations on the study by internal Hydro policies.

(ii) Physical

. likely evaporative losses through cooling process
. impact of continued operation under potential off-standard conditions
. storm water implications
. effects of icing
. changes in groundwater, levels - recharge

(iii) Chemical

. effects on water quality parameters
. potential for radioactive concentrations, effects of such concentration

(iv) Biological

. the bioligical studies completed in the alternate site selection stage should be reconsidered in conjunction with MOE in light of the chosen site for the need for additional evaluation

4. BIOLOGY (Terrestrial)

(i) Terrestrial Ecosystems

. potential for damage on and off site due to:
  - emissions - air
  - emissions - radioactive
  - emissions - solid
. effect on productivity
. system effects

(ii) Sensitive Species

. intrusion into system
. adaptability

(iii) Breeding Habitats (Terrestrial)

. possible effects from construction due to such factors as:
    - noise
    - storage areas
    - temporary camps
    - people access
. possible effects from operation due to such factors as:
    - increased siltation, erosion
    - alteration of current patterns
    - alteration of water level
    - alteration of animal/bird behavior
. significance for human interests
. significance for ecosystem stability

(iv) Rare or Endangered Species

. potential for effect
    - short term, long term
. displacement of habitat
. ability of species to adjust

5. LAND USE

(i) Planning

. impact on:
    - Provincial Government Plans
    - Regional Plans
    - Local Official Plans
    - Zoning by-laws
    - Other
    - Watershed Plans

(ii) Agricultural

. toxic effects
. changes to communities - labour
. changes to agricultural systems

(iii) Non-Agricultural

. effects on, or limitations to resource mining
. changes to recreational patterns
. near and far-field effects on forestry due to air contaminants
. changes in urban land use patterns

6. SOCIAL & COMMUNITY

(i) Health

. effect under normal conditions
. increase over ambient
. consider air, water, land releases
. safety measures to minimize

(ii) Community

. effects on population distribution
. alteration of labour forces
. effects on local industries
. community impacts
    - housing
    - education
    - servicing
    - transportation

(iii) Historic Sites

. effects of construction (plant, egress) on designated areas
. effect of operation, including traffic loads, increased access, etc.

(iv) Archaeological Sites

. effect

(v) Aesthetics

7. NOISE

. effects on urban, agricultural land uses

APPENDIX 16

D R A F T

MINISTRY OF THE ENVIRONMENT

ENVIRONMENTAL ASSESSMENT GUIDELINES-

ELECTRIC TRANSMISSION LINE STUDIES

DRAFT

ENVIRONMENTAL ASSESSMENT GUIDELINES-

ELECTRIC TRANSMISSION LINE STUDIES

OUTLINE

PART I - INTRODUCTION

1. The Environmental Assessment Act, 1975
2. Environmental Assessment Process
3. Environmental Assessment Document
4. Definition of Environment
5. Intent of the Guidelines

PART II - ENVIRONMENTAL ASSESSMENT PROCESS

1. Introduction
2. Transmission Line Studies
   a. General Context
   b. Utility Corridor Concept
   c. Public Participation
3. Assessment Steps
4. Assessment Levels
   a. Provincial Level
   b. Regional Level
   c. Sub-regional Level
5. Study Stages
   i. Conceptual Stage
   ii. Broad-Band Stage
   iii. Corridors Stage
   iv. Alignment and Preliminary Design Stage
   v. Approval Stage
   vi. Final Design
   vii. Implementation

PART III - THE ENVIRONMENTAL ASSESSMENT DOCUMENT AND OTHER COMMUNICATIONS

1. The Environmental Assessment Document
2. Other Communications

DRAFT

ENVIRONMENTAL ASSESSMENT GUIDELINES-
ELECTRIC TRANSMISSION LINE STUDIES

PART I - INTRODUCTION

1. The Environmental Assessment Act, 1975

The Environmental Assessment Act received third reading in the Legislature on July 14th, 1975, and was given Royal Assent shortly thereafter. The purpose of the Act is the betterment of the people of Ontario by providing for the protection, conservation and wise management of the environment.

The objectives of environmental assessment, as stated in the Green Paper on Environmental Assessment, September 1973 are:

- To identify and evaluate the potentially significant environmental effects of the proposed undertaking at the stage when alternative solutions, including remedial measures and the alternative of no action, are available to the decision-makers.

- To ensure that the proponent of an undertaking, or Government agencies required to approve the undertaking give due consideration to the means of avoiding or mitigating any adverse environmental effects, prior to any approval being granted to proceed with the undertaking.

...

2. Environmental Assessment Process

Environmental assessment employs an iterative process in which alternative solutions are identified, the environment is studied, and the effects on the environment of the various alternatives are examined, together with the possibility of mitigating adverse effects. By this means, the optimal alternative will be identified. This study approach promotes a decision-making process based on systematic and objective judgements in the examination of alternatives and considerations of the benefits and effects of an undertaking. Further discussion of the assessment process is presented in Part II.

3. Environmental Assessment Document

The Environmental Assessment Document (E.A.D.) is a report which records and describes the environmental assessment study process. The content of this document is specified in Section 5.3 of the Act. Further discussion of the document is presented in Part III.

4. Definition of Environment

The word "environment", as referred to in these guidelines, is that defined in The Environmental Assessment Act, 1975 (Section 1(c):

" (i) Air, land or water,

(ii) plant and animal life, including man,

(iii) the social, economic and cultural conditions that influence the life of man or a community, ...

(iv) any building, structure, machine or other device or thing made by man,

(v) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from the activities of man, or

(vi) any part or combination of the foregoing and the interrelationships between any two or more of them,

in or of, Ontario";

This broad definition of the environment requires the proponent to look at the total environment, not only the natural factors.

5. Intent of the Guidelines

These Guidelines are intended to assist in environmental assessment studies and their presentation. While the Guidelines attempt to interpret the legal framework of environmental assessment they are by no means intended as a replacement for a careful reading of the Environmental Assessment Act and the regulations made under its authority. In the case of any conflict or doubt, the wording of the Act and the regulations must, of course, prevail.

The Guidelines are not to be regarded as a model to be implicitly followed step-by-step. The use of a "cookbook" or a "checklist" approach has been avoided for the following reasons:

a. methodologies are still being developed for this type of study;

...

b. there is no agreed-upon methodology for transmission line studies;

c. flexibility is essential due to the nature of transmission facilities and their design and the diversity of environmental conditions across the Province.

NOTE: The process described for arriving at a final alignment within a study area and the terminology adopted, are based upon the current procedures of Ontario Hydro; this does not imply that other procedures may not also be acceptable.

PART II - ENVIRONMENTAL ASSESSMENT PROCESS

1. Introduction

Figure #1 (p. 19) outlines the main steps to be followed through the environmental assessment process of a given undertaking. These assessment steps (B-G) are also iterative, and may be repeated at each of the successive stages of the study (Figure #2). For example, steps B-G would be followed at the initial stage (i.e. conceptual), and then repeated through the more detailed stages in the process of identifying and evaluating potential sites and facilities.

2. Transmission Line Studies

(a) General Context:

The environmental assessment process for a transmission line undertaking takes place within a wide context. Each transmission line is part of an overall electric system which includes generating stations, other transmission lines at various voltage levels, transformer stations, switching stations, distribution stations, communication towers and other facilities. The electric system itself exists within the still wider context of the Province's development - past, present and proposed.

Conceptually, the transmission line undertaking can be visualized as one level in an interlocking hierarchy of plans, policies, programmes and projects. Other levels of the hierarchy influence both the nature of the undertaking and the content of the environmental assessment process. Electric system facilities which already exist, and the presence or absence of previous policy decisions by the Government, obviously must be taken into

...

account in the environmental assessment process. Reference to the wider context will help to explain the purpose and rationale of the undertaking; it will also help the proponent to determine the range of alternatives which need to be considered.

(b) Utility Corridor Concept:
Another consideration in such planning is the utility corridor concept, in which a number of linear facilities occupy a band of land wide enough to maintain a minimum distance between the various facilities, and yet to preserve their compatibility. The question of compatibility between transmission lines and other land uses should also be addressed, with particular emphasis on visual and social concerns (e.g. highways, recreation areas, etc.). Minimizing the number of separate utility rights-of-way in a given area should be a priority where possible.

(c) Public Participation:
The Environmental Assessment Act does not specifically require a public participation programme. The likelihood of public hearings being held makes such a programme desirable. Past experience has shown that studies lacking such a programme, may require further studies when brought before a hearing board. Public opinion may be thought of as a legitimate form of environmental data input.

Public participation in its wider context should apply at various stages throughout the study process. There are several objectives to be met by public participation in the environmental assessment process:

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- to inform the public about the proposed undertaking and its implications in terms of its advantages and disadvantages;

- to assemble information which is local in nature or is not included in regular sources of data;

- to solicit public opinion and perceptions with respect to alternatives or trade-offs.

3. Assessment Steps

The following steps should be taken into account when searching for an acceptable way of supplying electricity to a given area (refer to Figures 1 and 2). Steps B-G, which follow, are iterative functions and should be repeated at each stage of the study (see also Sections 4 and 5 below).

Step A - Identify Purpose

The proponent should identify and discuss his intention in proposing the development, with the reasons for wanting to provide a new or additional service.

Step B - Identify Alternatives

The alternative methods of achieving the purpose of the study must be identified. Alternatives should be researched, evaluated and documented at all stages.

Step C - Study Environment

Consistent with the broad definition of the environment as stated in Section 1(c) of the Act (see Part I(4) above), ...

data should be collected on environmental components that may be affected directly or indirectly by the alternatives. Such an inventory might include: an identification of flora and fauna and natural systems, topography, geology and other features of the area under consideration for each particular stage. This should include land use, human factors involved (socio-economic, cultural, aesthetic, etc), a description of the amenities and other information which may be necessary to fully describe the existing situation. The inventory of data to be compiled will vary in amount, detail, and scale depending on the stage of the study and the alternatives under consideration. A suggested range of factors to be considered in assessing locations for transmission facilities is presented in Appendix A.

Step D - Predict Potential Effects

The effects on the environment of implementing each alternative should be predicted. This analysis should be conducted at each stage of the study.

Step E - Mitigation

The possibilities for mitigation of the potential adverse effects should be identified for each alternative.

Step F - Evaluation

An examination of the identified effects, and possibilities for mitigation of each alternative, will enable the proponent to evaluate the alternatives in terms of their net positive and negative effects on the environment.

...

Step G - Decision

The comparison of the available alternatives, taking into account the results of the previous steps, will facilitate a decision as to the most acceptable alternative(s).

Thus, the outcome of the analysis resulting from steps B-G at all stages of the study will enable the proponent to decide the most feasible alternatives. These will be further studied in the next stage or if the final stage has been reached, the most acceptable alternative will be recommended for approval.

4. Assessment Levels

Each undertaking should be examined on several levels as shown in figure #2 (left side). The three main levels are: Provincial, Regional and Sub-Regional. They are further discussed below:

(a) Provincial Level

New electric facilities should be planned and assessed in relation to the overall electric system in general and provincial development, present and proposed, in particular. It is at this stage of the study that available Government and Hydro plans, policies, goals and objectives, stated and/or implied should be researched, evaluated, and incorporated into the planning of the

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electric system in a given area.

(b) Regional Level

Once the Provincial level has been adequately considered, the study should next consider similar available plans, policies, etc. at the regional level. Additional input should be gathered from agencies at levels below the Provincial Government e.g. Regional and Municipal Governments and other pertinent agencies.

(c) Sub-Regional Level

At the sub-Regional level, conceptual schemes can be developed in relation to a more defined study area taking into account the load centre to be served. At this point, the study can be divided into several stages as discussed in Section 5, below.

5. Study Stages

Conceptual schemes should then be developed and examined in several stages; within each of these, steps B to G as outlined earlier, will be repeated (see figure 2), utilizing the iterative process.

i. Conceptual Stage

This stage entails the identification and evaluation of all feasible conceptual schemes capable of providing the required service. It includes the selection of a geographically defined area (Study Area), which should be

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large enough to encompass the alternative system plans. The study area should be drawn to take into account the following: relevant existing and/or proposed generating stations or sites, neighbouring load centres, existing and proposed transmission lines (of 115kV. and over), as well as other linear facilities that have the possibility of being incorporated into a utility corridor. Using relevant information of appropriate scale and detail, the alternative conceptual schemes should be evaluated and compared and the least acceptable ones eliminated. At this stage, the study area might be contracted from its preliminary size. The proponent can then intensify the assembling of data both in amount, detail and scale in order to arrive at the next stage.

ii. Broad-Band Stage

Utilizing the information compiled within the Study Area, by following steps B-G, the proponent may define "Broad Bands". Such Bands, being perhaps from one mile to several miles wide, are areas where negative environmental impact is generally less than elsewhere.

iii. Corridors Stage

Within the Broad Bands, further study will allow the definition of corridor(s). These are narrower strips of land, within which the study will continue through refinement of data and analysis. It should be noted that

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the number of stages i.e. the number of times steps B-G are repeated, will vary according to circumstances.

iv. Alignment and Preliminary Design Stage

Progressively adding to and refining the information base on a narrower range of alternatives, will allow definition within the alternative corridors, of a narrower strip or strips of land, which is/are more suitable for the siting of the proposed facilities. There may be more than one alignment within each alternative corridor.

A comparative analysis will be undertaken of the alternative alignments, within alternative corridors. This will result in the definition of one or more alignments within one or more corridors. This in turn will be followed by the selection of a preferred alignment.

In this predesign stage, the approximate alignment, the proposed structures, and their probable locations will be considered. This would include analysis of topography, land use, visual-aesthetic and other factors relevant to the preliminary design of the facilities. Tower or pole design should receive special consideration in areas of high visual vulnerability.

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v. Approval Stage

Based on the findings of the study stages outlined above, the proponent may now prepare and present his study and recommendations to the Minister of the Environment, in the form of an Environmental Assessment Document (see Part III). The review and approval process required by the Environmental Assessment Act is illustrated in figure #3, which is designed to be read together with The Environmental Assessment Act.

On approval or conditional approval of the undertaking, further studies will follow as outlined below.

vi. Final Design

Engineering, land use, natural environment, aesthetic and other considerations will be further studied and evaluated in arriving at the centre line, structural design, placement and construction practices for each facility. The design process should be conducted with reference to the assessment in an attempt to mitigate identified impacts.

vii. Implementation

This stage is composed of three steps starting with construction and followed by the mitigation and finally monitoring steps (see figure #2). These three steps are further discussed below.

- Construction

Once the final design has been completed and agreed upon, the proponent proceeds with construction ...

according to agreed-upon guidelines. The type of equipment being used, and its mode of operation, is of great importance, especially in areas of higher vulnerability (e.g. environmentally sensitive areas, agriculturally sensitive areas, etc.).

- Mitigation

Unavoidable negative effects of the approved facility can be further reduced by mitigation measures as identified and reported throughout the study. The proponent should attempt to mitigate these effects during the various stages of the project; i.e. through planning, design and construction stages. They should also cover the construction period, operation and maintenance of the facilities, and contingencies for abandonment, or upgrading, in the future. Where a conditional approval is granted, the information obtained in the design stage may suffice to satisfy the conditions.

- Monitoring

Three aspects of monitoring should be considered:

i) whether the undertaking has been carried out as approved;

ii) the accuracy and adequacy of the effects predictions;

iii) documentation of the environmental changes due to the introduction of the facilities for use in the future studies.

Monitoring the study and the mitigation measures could be of great significance in determining requirements for future studies. Reviewing the study methodology and its application to a specific project will enable improved study methods to be developed in the future. ...

PART III - THE ENVIRONMENTAL ASSESSMENT DOCUMENT AND OTHER COMMUNICATIONS

This part of the Guidelines deals with the Environmental Assessment Document and other forms of communications related to the environmental assessment process and Government review.

1. The Environmental Assessment Document

As set out in the Environmental Assessment Act, 1975 (Section 5, Subsection 3), the Environmental Assessment Document must contain the following:

a) a description of the purpose for the undertaking;

b) a description and a statement of the rationale for:

   i) the undertaking,

   ii) the alternative methods of carrying out the undertaking, and

   iii) the alternatives to the undertaking;

c) a description of:

   i) the environment that will be affected or that might be expected to be affected, directly or indirectly,

   ii) the effects that will be caused or that might reasonably be expected to be caused to the environment, and

   iii) the actions necessary or that may reasonably be expected to be necessary to prevent, change,

...

mitigate or remedy the effects upon all the effects that might reasonably be expected upon the environment, by the undertaking, the alternative methods of carrying out the undertaking, and the alternatives to the undertaking;

d) an evaluation of the advantages and disadvantages to the environment of the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking.

Section 5(3) outlines the legally required content of an Environmental Assessment Document. However, the intention of the Section is not to set out an outline of the study process, a methodology, or a format for the document.

The Environmental Assessment Document is the official report to be submitted for review and approval under the Act. It will be a public document used at public hearings, if such are held. Acceptance, or amendment and acceptance, of the Environmental Assessment Document, and the approval, conditional approval or refusal of approval of the undertaking, will be given by the Minister of the Environment with Cabinet approval, or by the Environmental Assessment Board, as the case may be (refer to the Environmental Assessment Act, 1975). Figure 3 is a flowchart outlining the approval process for environmental assessments submitted in accordance with the Act.

...

The format adopted for the document will depend on the study process, and will incorporate the legally required content in a manner which will make the study process comprehensible to reviewers and decision-makers. The document, therefore, should reflect the process carried out in the environmental assessment study. All assumptions and planning considerations that influence the decisions throughout the study process, should be described and documented. The document should be written and organized in such a way that the reader can follow the progress of the study, and trace back the decision-making process to its initial stages. Enough detail need be presented in the final document to ensure that the conclusions reached are self-supportive.

2. Other Communications

Regular consultation with MOE and other interested Government agencies during the environmental assessment process, and prior to the submission of an Environmental Assessment Document, is likely to be advantageous for the proponent. While not mandatory, such consultation should do much to minimize potential conflicts and reduce the time required for formal review of the Environmental Assessment Document.

A mutual exchange of information between the proponent, the Government and the public may take the form of written presentations during the study process, and subsequent to the formal submission of the Environmental Assessment Document.

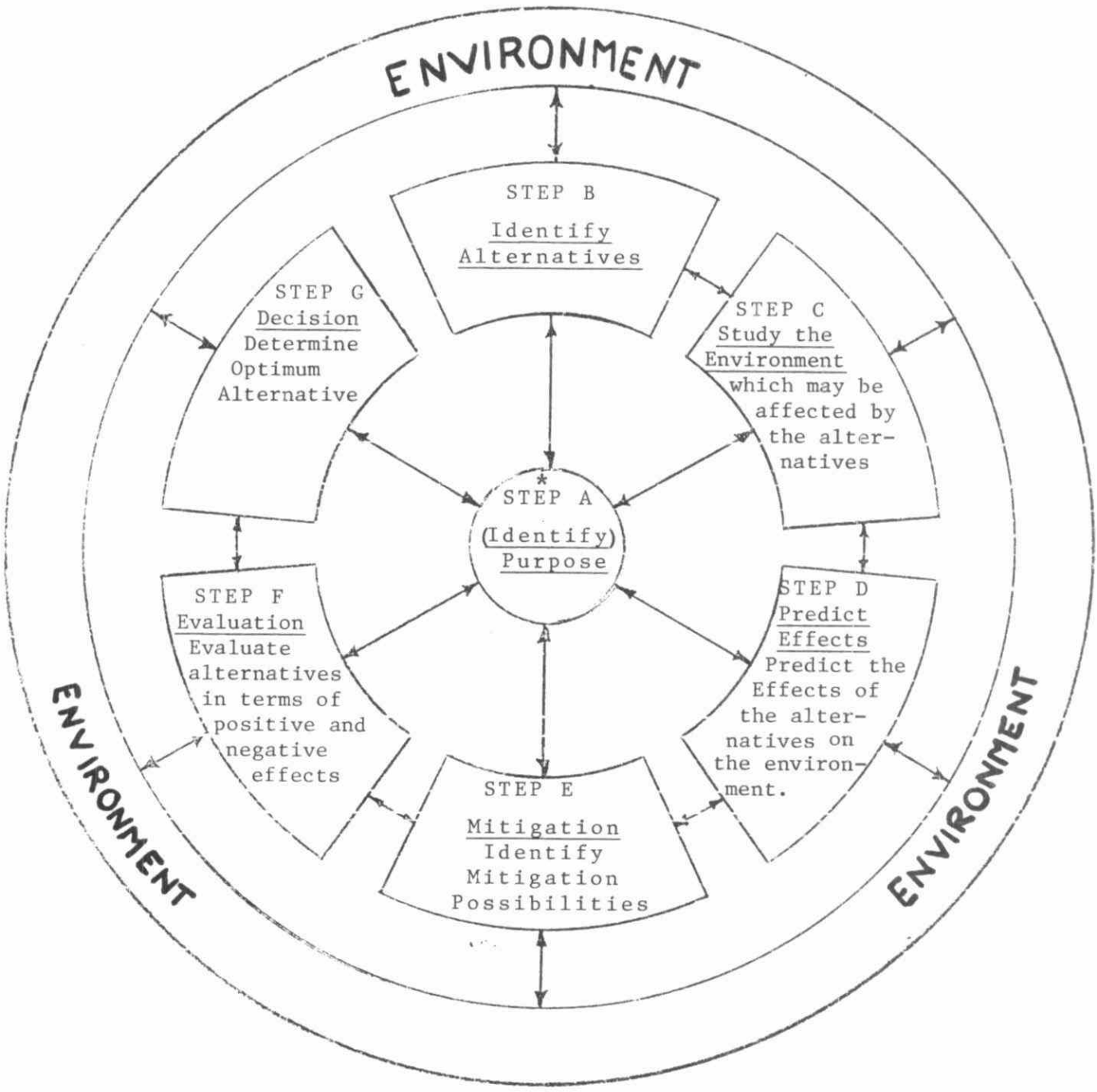
...

These Guidelines have suggested a breakdown of the overall study into several stages (conceptual, broad bands, etc.). The proponent, by providing a proposal prior to each of these stages, outlining what is intended to be done, will enable the agencies involved to gain understanding and provide early input. Such communications may become part of the content of the Environmental Assessment Document.

Further communications, by which the proponent could inform the Government and/or public on the progress of the study, can take the form of interim reports on the progress and conclusion of certain stages of the study. Such communications will facilitate an exchange of information, and could clarify views and concerns prior to any important decisions being taken by the proponent.

FIGURE #1:

BASIC STEPS OF THE ENVIRONMENTAL PLANNING MODEL AS ENVISAGED IN THE ENVIRONMENTAL ASSESSMENT ACT, 1975



*Note: The identification of the purpose is the initial step of the whole process. Once the purpose has been identified, it will be referred to in subsequent steps and stages.

APPENDIX A

SOME FACTORS TO BE CONSIDERED IN THE INVENTORY, ANALYSIS AND EVALUATION STAGES OF TRANSMISSION LINE STUDIES

INTRODUCTION

The natural and man-made environments are made up of interrelated and interacting components. The environmental assessment study deals with the identification, inventory and analysis of these components and their interrelationships, and the prediction of the potential effects on them of the proposed undertaking and alternatives thereto. Below is a suggested list of environmental factors to be considered in the study of transmission line undertakings. They are not to be taken as being exhaustive. They may be expanded or rearranged in accordance with the magnitude, location and stage of the study reached.

A. Natural Environment

1) Physical Features:

- topography
- geology (surface and subsurface)
- soils: types and capability (agricultural soils, engineering aspects, erodibility, stability, etc.)
- hydrology (surface and subsurface - drainage)
- water and air quality
- climate: micro and macro
- surface cover - woodlots, bodies of water, wetlands, etc.

...

2) Biological:

- terrestrial fauna and flora - emphasis on habitat
- aquatic fauna and flora
- identification of ecological systems and description of successional stages.
  - description of the interrelationships of and components of ecosystems.
  - assess the sensitivity of ecosystems to the type of undertaking under study both in terms of present and future successional stages.
- rare/endangered features - faunal or floral species, community, habitat, etc.
- sensitive/unique species, community, habitat, etc.

B. Land Use

Under this factor, data and information will be assembled to describe the existing land uses, planned and proposed or potential for:

- residential
- industrial
- commercial
- recreational
- special areas (open space, environmental protection areas, hazard lands, etc.)
- agricultural
- resource extraction - aggregate, forest, wildlife, etc.
- services: linear facilities (transportation, water supply, water treatment, energy, etc.)

...

- ownership patterns

C. Social, Cultural and Economic:

The proponent will inventory and assess all policies, programs and plans, both stated and implied, which should be evaluated to determine their potential effect on the proposed project and alternatives thereto or vice versa.

1. Social

- Population density and distribution
- Community structure
- Local governments, institutions
- Services and utilities
- Housing
- Health and safety

2. Cultural

- Historical
- Archaeological
- Other matters of cultural interest

3. Economic

- The provincial, regional and local economic implications which may affect or be affected by each proposed undertaking and alternatives thereto.

...

D. Visual - Aesthetic Considerations

Although normally this factor could be considered under the cultural factor, the public perception of transmission facilities suggests that this item be presented separately. The visual and aesthetic characteristics of an area should include the following examples:

- scenery; cityscapes, pastoral scenes, vistas, long or wide-open views

- wooded areas, meadows, marshlands and other bodies of water

- geologic formations

- historic sites and monuments

- trails, scenic roads, etc.

E. Engineering

- System Plan Criteria
- Security Considerations
- Criteria for Facility Design
- Requirements for construction, operation & maintenance
  - type and nature of equipment and mode of operation